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NATIONAL BEEKEEPERS' ASSOCIATION.

Transactions of the North American Beekeepers' Society, at their Second Annual Session, held at the city of Indianapolis, on Wednesday, Thursday and Friday, December 4-6, 1872.

Pursuant to adjournment, the North American Beekeepers' Society met in the room of the Supreme Court of the State of Indiana, at Indianapolis, at 9.30 A. M., on Wednesday, the fourth day of December, 1872.

The society was called to order by Rev. W. Fletcher Clarke, Vice President, from the Province of Ontario, Canada, who stated that the President, Mr. Quinby, had written to him that he could not be present, and requested him to take the chair. Having complied with the President's request he asked of the society, "What is your pleasure?"

Dr. G. Bohrer of Indiana, suggested the propriety of initiating the proceedings with prayer, and if there was no objection, he would request Vice President Clarke to do so. A general hearty assent being given to the proposal, prayer was accordingly offered.

The President said it was customary, at the beginning of the session of such associations, for the presiding officer to make some introductory remarks, and as Mr. Quinby had requested him to take his place, he had prepared an opening address, which, if agreeable to the society, he would now proceed to deliver. He then went on to say:

FELLOW BEEKEEPERS—In the absence of our much esteemed president (Mr. Quinby), which I am sure we all deeply regret, it devolves on me, at his request, to call this meeting to order and inaugurate its proceedings with some opening remarks. The quick flight of a twelvemonth has brought us together in our first annual meeting since the consolidation of the two beekeepers' associations into one great continental society. This event, happily consummated at Cleveland a year ago, we are here to commemorate, and to follow up with further indications

of apiarian progress. It is very fitting that we should meet on the present occasion in this city, where the initiatory organization was formed, and the plan of consolidation conceived and proposed; where, too, we received at the outset such tokens of appreciation from the citizens, the press, and the civic authorities, especially in the free use of the fine Senate chamber, in whose honorable seats even our lady beekeepers could feel for the time that they were not only *suffragists* but *legislators*, and now in this Supreme Court room, where we can feel that we have attained judicial elevation. From its peculiar and central position, the cordial spirit of its officers, editors, and people, and the number of such bodies that have seemed to come here as by some law of gravitation, Indianapolis deserves to be styled Convention City, and if it has not yet formally received that name, I propose that the beekeepers here assembled do so christen it forthwith.

It is my pleasant duty to greet you all with honeyed words of welcome. Though our society is not, in the technical—I had almost said the *cant* sense—either philanthropic or religious, yet there are features about it that tend to draw us together and forge the links of brotherhood and good fellowship. If he who makes two blades of grass grow where but one grew before, be—as is generally acknowledged—a benefactor of his race, so, also, must be he who causes two pounds of honey to be gathered where only one was gathered before; and in this view of it our society is most assuredly a benevolent one. And if the reverent, earnest study of nature in one of its most interesting departments be, as it undoubtedly is, a part of religion, then is our society a religious as well as benevolent one. We have so much in common with one another that we might not inappropriately adopt a familiar hymn couplet—

"Our fears, our hopes, our aims are one,
Our comforts and our cares "

There are so many disintegrating forces at work in society that anything which brings human beings together, and gives them a sense of unity and commonalty, is a great benefit. Our interest is a fascinating pursuit; the similarity of our tastes, endeavors and experiences,

and the pleasant acquaintanceships formed and fostered at these meetings, cannot but beget the feeling so well embodied in the pithy Scotch motto—"We're brithers a'!" May this feeling be paramount to every other all through our proceedings. May all our discussions be carried on under its influence. Then, though we may have our differences of opinion—and it would be a dull, uninteresting time if we had not—these will not interfere with our good fellowship, nor lessen our enjoyment.

The course of bee-keeping, like that of true love, never did run smooth, and we meet after passing through a disastrous winter and a profitless summer. If "misery loves company," as I suppose it does, that gratification must be complete on the present occasion. The cause or causes of last winter's terrible mortality among bees will no doubt form one prominent subject of discussion at this meeting. We have all our theories, and it is well that we should compare them. For myself, partly perhaps from habits of theological thought, and partly, it may be, from a dash of superstition in my nature, I have adopted the old time verdict of coroners' juries, always resorted to in mysterious cases, "Died by visitation of God." The correspondents of our bee journals have suggested all manner of explanations to account for the fatality of last winter, but I frankly confess none that I have met with fully satisfy my own mind. It is one of the peculiarities, and to me one of the charms of our present life, that we find a draping of mystery, as it were, about everything with which we have to do. What a world of shadows it is! How light and shade are mingled—here the clearness of noon, there the dimness of twilight, and yonder, again, thick, black night. The fact that the temple of nature has its mysteries, proves it to be the dwelling of God.

We can more easily account for the unprofitable summer than for the fatal winter. Unfavorable weather, drought, want of honey in the flowers, fewness of honey-gatherers, and the like, sufficiently explain this. We must expect fluctuations in the honey harvest, even as there are fluctuations in every other harvest and in trade. We must judge this pursuit like every other—by its average of seasons, and not by any one exceptional season. Bee-keeping has been denounced as a delusion and a snare, in certain quarters, because of the discouraging character of the past summer and winter. In the same style, a very dismal story might now and then be got up in regard to farming in general. Though it is the basis of all human prosperity, it has its drawbacks, difficulties and failures. Farmers, too, are for the most part adepts at the grumbling business. The poet Cowper did not wrong them very much in his picture of tything time. The rector wants his dues, for parsons must live as well as other people, but his rural parishioners are loth to pay, and seek to move his pity:

"One talks of heat and one of frost,
And one of rain and hail,
And one of pigs that he has lost
By maggots at the tail."

Since our meeting at Cleveland, the interests of agriculture on this continent have sustained a great loss in the death of Samuel Wagner, whose name will go down to posterity inseparably linked with that of the *American Bee Journal*, so long and ably edited by him. Though a stranger to him personally, I am, nevertheless, qualified, from a lengthened acquaintance with his writings, to speak of him as an apiarian and an editor in terms of highest eulogy. Others who knew him better can, and no doubt will, give expression to their estimate of his worth and of his eminent services to apiculture; and this society will do itself, as well as him, honor by adopting, recording and publishing a resolution of regret at his removal and praise of his abilities, virtue, and life work. The beekeepers of this country will also feel, doubtless, that, as the most graceful act of respect and the most enduring monument to his memory, it behooves them to lend a hearty and generous patronage to the periodical established by him with so much earnest and self-sacrificing devotion to apiarian interests.

Every member of this society should strive to get up a beekeepers' club at home. These clubs should send representatives, to State, Provincial or Territorial organizations, and this continental body should, in due time, become representative and be composed of a certain number of delegates from each State, Province or Territory in North America, thus constituting a sort of high court of apiculture, to which the knottiest questions and hardest problems are submitted, and whence there shall emanate decisions and rulings of highest apiarian authority. Even now, to a certain extent, this society may properly regard itself as both deliberative and legislative, and there are some points on which it would be eminently beneficial to the bee-keeping public for it to record its convictions. We could unanimously pass a resolution to the effect that gum and box hives are behind the times—"played out," as the boys say, and if it were not for the glitter of the "almighty dollar," we could agree to say that given the movable frame, the bevelled edge and the air-space, nothing else is of much account in a hive, except as a gratification of taste and a play of fancy. Any hive containing frames of convenient size and safe to handle and subject to the operation of the *melipilla*, is good enough for successful bee-keeping. The bees worked as successfully in the carcass of Samson's defunct lion, as they now do in the most artistic and highly decorated bee-palace of modern times, and their honey was just as sweet as that stored in the daintiest and prettiest of our fancy boxes. The bees are not particular. It is the convenience and gain of the beekeeper we have to consult. Hives don't differ much in their average profitableness, other things being equal, and it is an injury to bee-keeping as a business, to convey the idea that there is any magic in a hive, or to indulge the hope that by and by we shall get one so wonderful in all its appointments that it will need no looking after, except to sell the honey. It has become one of the reproaches of apiculture that "a hive to sell"

is almost synonymous with "an axe to grind." It is, of course, impossible to do it, but this society could agree to adopt one hive. Many benefits would result from it. My apiary is nearly ruined by a variety of hives. One and another has sent me a hive to try until I have them of all sorts and sizes, and am bewildered which to adopt, tempted to pray, "Save me from my friends!" and should feel relieved if a law could be passed prohibiting me under heavy pains and penalties to use any but a certain one. It is with hives very much as with reaping and mowing machines. As an agricultural editor, I am often asked which machine is the best. I don't wonder at it, for if I were actually farming, I should be puzzled which to buy. But the truth is, they are all valuable. There are good, better, and best no doubt, but a big crop of hay or grain can be well harvested with any of them, and so can a big crop of honey be harvested with any good movable comb hive, if the bees are well managed, and the extractor wisely worked. One thing in regard to hives is assuredly important, and that is, that they be not too complicated and costly. Simplicity in hives, like simplicity in machinery, is a great desideratum, and they should be capable of construction by any farmer who is handy with tools. Your amateur beekeeper who does not look to his bees for support, may lay out money on costly and fanciful hives, but the million want and must have a cheap, common sense, practical hive, good enough if home made. As for moth, miller traps, winding passages, comb guides, and such things, they are like gold buttons to a working man's every-day coat, superfluities, if not follies. If we cannot wisely take action as to these things, we can at any rate ventilate them, and leave our discussions to exert their own influence on the public.

I am told "hive men" are very jealous and sensitive, and perhaps the remarks just made may bring a hornets' nest about my ears, but as I wear a veil and gloves of perfect good nature and kindly feeling toward all, I don't expect to be seriously hurt. Moreover, having come from a land of liberty to a land of liberty, I expect to exercise the right and enjoy the luxury, so much prized by Britons and Americans, of free speech. And what I expect for myself I concede to others. Let us have plain, outspoken, unvarnished talk, without ill feeling or discourteous personalities. Then we shall be "happy to meet, sorry to part, and glad to meet again."

Having stirred up the "hive men" a little, I propose to pay my respects for a few moments to the editors and correspondents of the bee journals. Would it not be well to pass a resolution that we will support no apiarian journal that indulges either in bad temper or bad grammar, or that calls or permits people to call others hard names? No one is fit, to be an editor who murders what we Britishers call "the Queen's English," or who has not the common sense and dignity to exclude from his columns all that is low, vulgar and abusive. There are many intelligent correspondents of periodicals, whose early education has been neglected, but who are nevertheless valuable contributors. Their ideas

are good, and very often they choose forms of expression that are original and forcible. Now it is unfair to them to put their communications in the rude and crude form in which they are received. An expert editor can "fix up" these communications and make them presentable with less labor than it takes to get up original articles. And what a gratification it must be to a correspondent unskilled in the rules and graces of rhetoric to have his ideas put into good shape and made not only readable, but attractive. It is akin to the pleasure a poor man feels when his children receive notice and kindnesses from richer neighbors. Not only should communications be pruned into grammatical shape, but the knife should be remorselessly used in cutting out every harsh epithet, every angry word, every unkind expression, everything likely to stir up the worse part of human nature. It may be urged that being outside of all the patent right disputes, which have turned the peaceful arena of bee keeping in the United States into a battle field, I am unable to understand and appreciate the provocations and temptations to calling hard names, and showing bad feeling. Perhaps there is force in this. But it is not so much the censor as the peace maker that I seek to act. I do not pronounce on the merits of any question, or take sides in any dispute. I would heal some places and pour oil on troubled waters. Do we not all believe in that sublime religion which insists on the gold rule, "Whatsoever ye would that men should do unto you, do you even so unto them," which commands us to "love our neighbor as ourselves," which forbids us to "render evil for evil," or "railing for railing," and which says, "if any man smite thee on the right cheek, turn to him the other also." While believing like Christians, let us not behave like heathens.

In conclusion, I could wish that I were qualified to point out to you some fitting topics for discussion at this meeting. There are many questions I should like to ask of fellow beekeepers who have older and wiser heads than mine, and whose experience in apiculture has been more extensive than mine. And as opportunity offers in our public sessions and private intercourse, I shall gratify my curiosity and display my ignorance. I suppose we are all here as learners, but there are some amongst us who are better qualified as instructors than others, and those who occupy the advanced forms or the teachers' desk in the school of apiculture, are best fitted to guide our deliberations both as to the suggestion of topics and the treatment of them. President Quinby, in a letter which I received a few days ago, but which I have unfortunately mislaid, commissioned me to lay three subjects before you, one of which has escaped my recollection. The other two are, first: "Will right management of bees develop peacefulness of disposition, as we know wrong management develops the opposite—in other words, what is proper bee management?" The second topic is that, which more than any other, is now pressing heavily on the hearts of all beekeepers in the land: What caused the disastrous losses of last winter, and how may the repetition of that sad experience be avoided in future?

I trust our present meeting will deepen our interest in apiculture, give a new impetus to this pursuit, unite us more heartily in friendly co-operation, strengthen and develop as a power for usefulness this North American Beekeepers' Society, and so hasten on the millenium of bee-keeping, which a humble poet of your own has pictured in the following stanza:

"With all facilities for honey getting,
Grace of bees that will admit of petting;
Each household of an apiary possessed,
Bee-keeping followed with unflagging zest,
Honey and milk shall flow all countries through,
And 'home, sweet home,' obtain a meaning new."

On motion of Secretary King, of New York, the president appointed a committee to prepare an order of business, and also topics for discussion, with instructions to report at 2 P. M. The committee consisted of Seth Hoagland, of Pennsylvania, chairman, Dr. T. B. Hamlin, of Tenn., Dr. George L. Lucas, of Illinois, Mrs. E. S. Tupper, of Iowa, Dr. Jewell Davis, of Illinois, J. W. Hosmer, of Minn., and Hon. M. L. Dunlap, of Illinois.

In the absence of a regular order of business, the president stated that Dr. Bohrer had prepared a paper on "The Objects of this Society," which he would call on him to read, if consistent with the pleasure of the society. There being no objection, Dr. Bohrer read as follows:

Ladies and gentlemen of the North American Beekeepers' Society. This being our third annual session, it will not, I think, be deemed improper or unimportant to take a retrospective view of our proceedings, and, if possible, ascertain and expose before the public, in part at least, the beneficial results which have been derived from the same by the masses of the bee-keeping public.

For most unquestionably it should be the grand object of a national organization of apiarists, to benefit not only the few who may meet and deliberate from time to time, but, if possible, the entire profession should in some degree or other share the benefits, from the humblest beginner with his single colony, to the most extensive apiarian with his thousand swarms.

But, in attempting to canvass our proceedings, I feel compelled to acknowledge myself somewhat at a loss, on the account that our reports up to our last annual meeting are too meager to afford any considerable amount of assistance; and aside from this, I have not had access to our corresponding secretary's record books, so that my position is not at all fortified by official reports, but I am left to treat the subject entirely from information obtained through an extensive correspondence and personal observation. Such I will state in the outset should not be the case; but instead of such a state of affairs, our records should be full and complete, so that any one, whether directly connected with our society or not, could examine our proceedings at any time, and find them to be such in character as to reflect credit upon the organization from which they emanated. Such is the condition of our report of the Cleveland convention; but the re-

ports of the two previous meetings, held here and at Cincinnati, are such as to amount to but little more than a blank to all who were not present to witness the deliberations.

At Cleveland, a publishing committee was appointed, and positive instructions were given to publish the proceedings of all our meetings held up to that time, but from some cause or other, not yet explained to the satisfaction of many, only one third of our record is in print. The explanation given, states that a full report of our proceedings of the session held at this place, could not be obtained. But why such should be the case, I with many others cannot fully understand, in presence of the fact that we had a secretary, who stated to me in person, some months after the close of the session mentioned, that he held the records of our proceedings, and that the same would be turned over at Cleveland.

This promise on his part was complied with in part to my certain knowledge; but as to whether or not a complete report was transmitted I am unable to state, but I will at any rate hazard the prediction that such was not the case, or the funds in our treasury were not sufficient to defray the expense of publishing our transactions in full. Here I will let my inquiries rest, and will at once state that unless we can so shape our transactions as to furnish all who may feel disposed to read after us, a true copy of what we say and do, it is simply a waste of time to meet and transact business, except to the few who may have something to sell that pertains to bee-keeping.

To such as have a hive to sell, or some colonies of bees and queens to dispose of, a convention is a very good place to scatter circulars, and describe the excellent qualities of a hive. It is also a place of unsurpassed qualities for editors of bee journals to procure subscribers, and to get a few friends to puff them and their merchandise, a full report of which never fails to appear in the next issue of their papers. This is all right and proper, as every person is justly entitled to the privilege of advertising his own business to the very best advantage, but it cannot be expected that they will put very much in print, and herald the same broadcast over the country, that is not calculated either directly or indirectly to advance their own personal pecuniary interests. Such being the case, it is quite easy to understand that all who do not happen to be present at our meetings cannot become the possessors of anything but a garbled report of our transactions, and that the grand object for which a national society should exist is at once crippled, and unworthy of the support of the masses, whilst it is conducted upon such a plan.

For all cannot attend our meetings; perhaps not more than one out of every hundred who feel, or who can be made to feel themselves interested, provided we conduct our business properly, can be present, for two very conspicuous reasons.

First. Many of our railroads stubbornly refuse to pass our members to and from our conventions except full fare is paid both ways. True, some of them have from the first move that was made towards the organization of a National body of

Apiarians, performed a praiseworthy part in this respect. But not a sufficient number of them have done so to enable hundreds to attend who feel a keen desire to be with us.

Secondly. Many who are quite anxious to be in attendance are not so situated in a pecuniary point of view as to admit of their being with us, even if all our roads would pass and repass them at reduced rates. And I might add, truthfully and properly, that in case it were possible for one per cent. of the beekeepers of the country to attend our annual sessions, it could not be made practicable, because a hall of suitable dimensions to contain them could not be obtained; consequently our sessions could not be as interesting as if attended by from fifteen to twenty from each State.

Such a number of representatives would constitute an audience off from six to eight hundred, by whom business could be transacted intelligibly and interesting to the entire assembly; and at the same time the proceedings of such a body of apiarians, if printed in pamphlet form and distributed throughout the country, will awaken an interest in apiculture, and bring about results which, whilst they have never been equalled before, will surprise the masses of the beekeepers themselves; because fifteen or twenty delegates from each State can give a reliable account of the resources of the different districts which they represent; what the average yield of surplus honey is; the method of bee management during the summer and winter, the kind and shape of hive best adapted to the different sections, as it is not yet certainly understood that a hive which in form is well adapted to one climate will answer well in all. For some contend that a hive which is well adapted to out-door wintering in a warm climate, will not, on account perhaps of its depth, answer a good purpose in Northern latitudes.

From a general survey like this, the experienced apiarian will at once understand that in distributing our records throughout the entire country, reliable methods of bee management are made available to those whose experience is not extensive, and who are hesitating as to whether to move forward in the enterprise of bee-keeping, or whether to abandon it entirely, through a lack of confidence.

All are aware that no branch of industry is so poorly supported by confidence as that of apiculture; and all intelligent and successful beekeepers, are aware also, that this universal lack of faith is due to two principal causes, namely, imposition and a lack of true knowledge as to how to manage bees. Impostors have visited, and I hope to be pardoned for asserting that they are still visiting, every foot of territory throughout the country, and are selling both hives and books which are in many instances worse than useless when tested in practical bee-keeping. But whilst such is the case, I would not have it understood that all who fail can justly claim that they have been imposed upon, either in the merits of the hive or the book on bee-keeping, which they have purchased.

For, as is the case in all pursuits, many persons begin and make disastrous failures. Some to my

own personal knowledge have read a standard work on bee-keeping, but have never studied it carefully, and have at the same time commenced bee-keeping on a large scale with a good hive, and in a short time have abandoned the pursuit in perfect disgust, on account of severe loss sustained.

But I have never yet met with any one that commenced cautiously, on a small scale, and increased his colonies in numbers in proportion to the increase of knowledge and ability to manage them, who was dissatisfied with the results. But whilst such is the case, it is of the utmost importance in giving advice to beginners, to look well not only to the acquirement of a knowledge of the habits of the bees, where it is desired to keep them in large numbers, but also to look well to the location and season.

For any country which does not abound in honey producing plants in large quantities, and is subject to protracted droughts, is not calculated at all for bee-keeping as a profession; yet all sections of country which are adapted to agricultural pursuits, will support a sufficient number of bees to supply the inhabitants with honey for home consumption, if the necessary attention be given them. But all who have devoted much time and attention to apiculture are aware that such teaching has not been practised on a large scale by many who have scattered yellow-backed bee literature in every portion of country upon our continent; but, on the contrary, these six leaved pamphlets have been printed and sown broadcast among the anxious but unsuspecting, and uninformed bee owners, under the title of true guides to fortune in bee raising; no matter what the character of the country might be in which they chanced to find a victim. The only things required to insure success and wealth, through the medium of the apiary, they tell us, are their hive and their so called storehouse of information, and the matter is at once sealed in our behalf. We, of course, are in favor of any move that will in a short space of time make us wealthy. The hive and book are both bought at high figures, as an institution which is to make us wealthy cannot be gotten up for any trifling sum; our bees are turned in, and we go to bed contented, and seldom ever wake up on the subject of being cheated, until our bees are either dead, or in a condition almost if not entirely worthless. Occasionally however, the bees do not perish, but the owner learns, after considerable disappointment and pecuniary loss, that there is something in the shape of a mistake about that book and hive of his, and he drops the matter, and concludes that there is no money in bee-keeping to him, as he has no luck with bees.

But it would be useless for me to proceed farther with a rehearsal of the frauds and deceptions which have been palmed off upon the uninformed. What is most important to us as a national society, if we mean to advance bee-keeping interests, is to adopt measures by which such fraudulent impostors, can be to a great extent defeated, and reliable information put into the hands of all, by printing in full our proceedings, and offering them at such figures as all can afford to pay. True, our proceedings will

not take the place of a standard work on the habits of bees and their management in every particular, but they will in many respects furnish the masses with knowledge of a reliable character, which no work now in print can produce, and information too, which will prove to be of infinite value not only to the beginner, but to many who have the benefit of years of experience in practical bee-keeping.

But, says one, has not all this been done, and is it not the object of our society still to have our proceedings printed, and offered to the public? In reply, I would say, that in part it has been done, but not in full, and unless our constitution and by-laws are so shaped as to provide for the accumulation of a treasury fund, I see but one plan by which this object can be accomplished, and that is for the editors of all our bee journals to procure and publish a true and full report. And in order that they may procure a full report, our society should employ some one who is fully competent to make out a complete copy, and furnish the same to each editor, who can well afford to put the same in print, and send it in company with their journals to each subscriber; for it will render them much more interesting and valuable to the readers, who, on this account, will procure a much larger number of subscribers than they will if the journals are less interesting.

Such a plan, however, can only be carried out in full, by a hearty co-operation of those who edit our bee journals from time to time, and cannot, to say the best of it, be made an effective measure longer than from one session to another. And in case the editors who make such arrangements happen to vacate the editorial chair, before the proceedings are printed and distributed, the matter is left to the option of their successors which leaves it surrounded with uncertainty. So that the surest plan will be that of raising the necessary fund, within ourselves, and have our printing done. And there are two methods of obtaining a sufficient amount of means to accomplish this. One is to appeal to the liberality of the members of the society at our meetings, and the other is that of amending our by-laws, so as to tax each member fifty cents or one dollar per annum, or as much as may be necessary to defray the expense of printing.

To some it may be uninteresting to hear this matter discussed, but to such I would say, that this is a matter of no minor importance, as it is the very foundation upon which depends all our future prospects of success and profit, to not only the masses who are annually looking to us, for something new and valuable, but to ourselves. For, if we expect to be very materially benefited by meeting together from time to time as a national body, it is a matter of the most vital importance to have our transactions in print, to be kept as a book of reference when at home. For there is no one whose memory is so good as to enable him to make a record of all he hears, in his mind, and be ready to call the same into requisition whenever circumstances may demand it.

But aside from this, if the results of our expe-

rience in practical bee-keeping, are put in print and distributed throughout the country, thousands of persons, both male and female, who up to the present time have little or no knowledge of apiculture as a branch of industry, will be induced to engage in it at once. Such will be the case, more especially with the women of our country than many now suppose, as many of them are favorably situated in every respect, except that of a competent knowledge, as to how bees are to be handled in order to be profitable.

A true knowledge of bee-keeping will at once teach them that this pursuit is peculiarly adapted to their sex. The apiary being situated near the dwelling, renders it convenient for them to superintend the same and see that their little servants and co-laborers are kept constantly employed in an advantageous and profitable manner.

At the present time we have quite a number of talented and educated ladies who are engaged in bee-keeping, and are admirers of the same as a pursuit of income and profit; and many of them have requested me, through the medium of numerous letters received, to use every effort in my power to encourage women to resort to this branch of business as a means of support. And I know of no one method so well calculated to offer such encouragement as that of placing our proceeding in the hands of thousands who as yet know nothing of this profession as one of income. And by adopting this plan, we place before them the names and addresses of several, who are reaping handsome rewards from their bees.

But, ladies and gentlemen, time forbids that I should discuss this subject at greater length, as there are many other matters of importance to be considered by our society. But I must request most earnestly, that before we adjourn, effective measures will be adopted through which our proceedings will appear in print promptly after each session, and reach the firesides of many who as yet are uninformed as to the merits of this occupation. And in conclusion, I will state that unless we can devise means, through which our record can be put in print, I cannot encourage the upbuilding and farther prosperity of a national society of beekeepers.

G. BOHRER.

Dr. Bohrer's paper was, on motion referred to the business committee.

The president drew the attention of the society to the topics suggested by Mr. Quinby, as presented in the president's address, and suggested that they be taken up and disposed of, which was agreed to.

Mr. Quinby's first question was:

"Will right management of bees develop peacefulness of disposition, as we know wrong management develops the opposite?"

Dr. Bohrer, of Indiana, said he had handled bees roughly without irritating them, while others could not be kept peaceable with the quietest handling. They varied in temperament. He considered that they had fixed habits, while their dispositions were inconstant, but that they acted wholly on the defensive. By gorging them

with liquid sweets, they were generally rendered amiable. In one instance he had, for six successive days, handled a colony of bees repeatedly without their showing the least resentment. On the seventh day he opened them with the usual care and precaution, and they became terribly excited. All of them flew at him, and yet he was not aware of doing anything unusual or that should have irritated them.

Dr. Geo. L. Lucas, of Peoria, Ill., differed from *Dr. Bohrer*; had seen one *Brooks*, of McLean Co., Illinois, exhibit bees at fairs that he was satisfied were tamed. He carried them about for weeks and handled them with impunity. On one occasion *Dr. L.* handled them himself, when *Brooks* was disabled from doing so, and found them to be as gentle as could be wished. He tried his own uneducated bees and failed. Thought they could be taught to recognize their keeper by scents.

Dr. Bohrer. Were they not fed on liquid sweets?

Dr. Lucas. They were not fed at all. *Brooks* used no sweets. It was in his opinion a matter of education.

Mr. R. A. Southworth, of Odell, Ill., thought with *Dr. L.* that bees could be tamed. After handling bees from four to six days he was enabled to open them without taking the usual precaution of alarming them first.

Mrs. E. S. Tupper, of Des Moines, Iowa, thought that the members misunderstood *Mr. Quinby's* question. She understood the question to apply to the permanent improvement of the race, by careful breeding and selection, and not to the management of single colonies. Bees at fairs are not in a normal condition, and consequently do not act normally. To teach bees in an apiary to know their owners would require constant teaching, as the lifetime of a bee is short, and young bees were constantly taking the place of the old ones, so that every day new acquaintances would have to be formed; thought that they did not know the way they were handled and managed, and only responded with gentleness to gentle and proper handling, such as a good beemaster knew how to give; that they did not know strangers, but that strangers were ignorant how to act with them, and supposed in consequence, *Dr. Bohrer* no doubt acted carelessly on the seventh day, having too much confidence in the amiableness of his colony of bees. Some bees are cross while others are the opposite under apparently the same conditions. If we would pay more attention to the selection of queens to breed from, whose progeny had the desirable qualities in the greatest perfection, great improvements might be permanently made.

Dr. Lucas asked how far from a normal condition are the bees at fairs, when they were set down and opened and went to work carrying in honey and pollen?

Mrs. Tupper. The moving and stirring of the crowd around them kept them in continual alarm, so that they were always filled with honey, and consequently in a peaceful, normal condition. Hives that are continually disturbed every day are always more easily managed, for they are kept in an abnormal condition.

Mr. G. W. Zimmerman, of Urbana, O., asked, Does opening a hive often make the bees more quiet?

Mrs. Tupper. It does.

Mr. W. R. King, of Franklin, Ky., asked, Did not *Dr. Bohrer* kill some of the bees, and thus cause irritation?

Dr. Bohrer. Did not kill any.

Mr. W. R. King, thought that the scent of crushed bees would induce anger.

Aaron Benedict, Bennington, O. Bees are influenced by the condition of the atmosphere and weather, and are more easily roused to anger in damp or rainy weather.

Mr. A. J. Pope, Indianapolis, Ind. Had a hive that he opened five or six times a day for some time and always found the colony peaceable, but after letting them alone for several days they showed rage when he attempted to open it.

A. F. Moon, Indianapolis, Ind. Bees could be domesticated only on the principle advocated by *Mrs. Tupper*. The progeny of different queens differed in temper and other qualities, just as with man and the brute creation, and by a careful selection we may make the desired qualities regular and permanent.

Mr. Seth Hoagland, Mercer, Pa. Bees taken to a strange place were generally peaceable when opened. They become cowed. A "rooster" fights best on his own dunghill. Thought bees susceptible of education, but that they could be improved by selection and breeding as advocated by *Mrs. Tupper* and *Mr. Moon*.

Mr. McFetridge, of Carthage, Indiana, did not believe that moving bees tamed them. He practiced moving his bees to pasturage twenty to thirty miles every year to take advantage of the poplar, linden, and other flowers that were located apart in different groves, and found many, that on opening them, "gave him fits."

Mr. Hoagland did not mean that moving in all cases tamed bees, but that was its tendency.

A. F. Moon. No bees were so docile but what they could be excited to anger, but as a rule, if you will deal gently with bees they will deal gently with you. Moving bees did make a difference, but while some would be subjugated by it others seemed to be more belligerent.

Rev. H. A. King of N. Y. If bees are thoroughly subdued there would be no show of anger. It should be thorough when undertaken.

I. S. Merrill, Fortville, Indiana. Breathing on bees will irritate them. Had known instances where the breath of strangers, six or eight feet off, to the windward of the bees, had enraged them.

A. Pillen, Beverly, Illinois, sawed and bored holes in the top of a hive to put honey boxes on, without exciting the anger of the bees.

I. W. Hoerner, Janesville, Minnesota. Bees can be domesticated. He had some bees set by a path that became so accustomed to passers that they never tried to sting. Believed that they could be so familiarized and accustomed to being handled, that they would be perfectly peaceable.

Dr. T. B. Hamlin, Edgefield Junction, Tenn., gave experience with bees placed on a path near a gate that was used and slammed repeatedly

during the day, and thought they became accustomed to it, and did not mind it. They were not Italian bees, but the gray bees of the south.

Mr. McFetridge had bees in the Huber leaf hive, which he set on his porch, which soon became so tame that they bothered no one.

President Clarke thought *Mrs. Tupper* correct in the construction she put on *Mr. Quinby's* question. It was an interesting subject; more so to him, perhaps, than to others, from the fact that he was *bee* hated. Why should we not improve them, and even carry it to such an extent that they would have no inclination to sting except upon very rare occasions. It was probable it could be done. There was evidently a difference in the temper of different colonies of bees of the same variety; there was no doubt that they had their moods, the best of them are not always alike amiable. They were in that respect like men and women, but some you can approach, at all times, with confidence; others you have to find out their moods before approaching them. A mother may have a gentle progeny, while her daughter queens may produce a vicious offspring through the influence of a remoter ancestry. We have to take all these things into account, and use appropriate means to correct what is wrong and encourage what is desirable. As a rule, it does not take as much to arouse the black bees as the Italians. They are easier to take offence.

Dr. Bohrer. Have you had any experience in taming the zebra?

President Clarke. No, but in proof of a diversity in the natural disposition of bees, he might say that he had in one instance a colony sent him by express, that from rough handling was broken open on the route, yet they came and were delivered without troubling any one on the cars, while another that was expressed in the same way, got broken open and stung around generally. The locomotive had to put on extra speed to run away from them.

Mr. Hoagland, Pa., could not join *Mr. Clarke* in the wish for a race of bees that had no stings.

President Clarke. Did not say a race of bees that had no stings, but he wanted to breed out of them the desire to use them on ordinary occasions.

Mr. Hoagland thought that their being armed with a sting was a wise arrangement, as without the means to defend their stores, they would be continually robbed and become extinct. Their existence depended on their stings, and he thought they could not be entirely deprived of the instinct to use them.

Dr. Bohrer thought they could not be rid of the disposition to resist assaults or robbery. Liquid sweets and other means could be used to control them, but even then, if roughly handled, they would resist.

Mr. Pallen. Never strike about them or blow your breath on them or they will resent it.

Dr. Hamlin had a colony that became noted for extreme crossness whenever approached, but by being very cautious and gentle, and taking time, he was enabled to handle them even without the use of smoke. He was at least twenty or thirty minutes in opening the hive, for when he

attempted to raise the honey board they were ready to fly at him, but after patient and repeated trials, he took it off, and took out the frames without arousing the anger of any of them.

The society adjourned to 2 o'clock P. M.

AFTERNOON SESSION.

The society met at 2 o'clock, Vice President *Clarke* in the chair.

The business committee, by their chairman, *Seth Hoagland, of Pa.,* made a report in part, which was received, and after some discussion and slight amendments, was adopted, as follows:

The business committee report the order of business as follows:

1st. There shall be three sessions each day, from 8 A. M. to 12 noon; from 1½ to 5 P. M., and from 7 to 9½ evening.

2d. That *D. L. Adair* be employed as reporter of the society, and that a full report be had of the proceedings to be published in the different Bee Journals and Agricultural papers.

3d. The election of officers shall be held at 3 o'clock, P. M.

4th. Discussion of unfinished topics of forenoon session.

5th. Topic for discussion at night session. "Is bee-keeping desirable on all farms and at all suburban homes?"

Hon. M. L. Duhlap of Champaign City, Ill., moved to amend the 5th article of the constitution, so as to read:

"Any person may become a member by giving his or her name to the secretary, and paying an annual fee of \$1. except ladies, who shall be admitted free of charge," which was seconded and finally adopted after animated discussion.

The hour of 3 o'clock having arrived, the special order, which was the election of officers, was called, the result of which was as follows:—

Rev. W. F. Clarke of Guelph, in the Province of Ontario, Dominion of Canada, was elected President.

Rev. H. A. King, of the City of New York, was elected Secretary; *D. L. Adair, of Hawesville, Ky.,* was elected Corresponding Secretary, *Hon. M. L. Dunlap, of Champaign City, Illinois,* was elected Treasurer.

The following Vice Presidents were elected: For Ohio, *S. P. Shipley, Olena.*

"New York, *Capt. J. E. Hetherington, Cherry Valley.*

"Pennsylvania, *Seth Hoagland, Mercer.*

"Kentucky, *W. R. King, Franklin.*

"Tennessee, *Dr. T. B. Hamlin, Edgefield Junction.*

"Indiana, *W. A. Schofield, Indianapolis.*

"Michigan, *Prof. A. J. Cook, Lansing.*

"Illinois, *Dr. Jewell Davis, Charleston.*

"Minnesota, *J. W. Hosmer, Janesville.*

"Iowa, *Mrs. E. S. Tupper, Des Moines.*

"Missouri, *L. C. Waite, St. Louis.*

"Kansas, *Dr. L. J. Dallas, Baldwin City.*

"Utah, *W. D. Roberts, Provo City.*

"New Jersey, *E. J. Peck, Linden.*

"Wisconsin, *Rev. A. H. Hart, Appleton.*

"District Columbia, *Hugh Cameron, Washington.*

"Ontario, *Dr. J. C. Thorn, Garafraxa.*

For Georgia, R. Peters, Atlanta.

" Texas, Rev. R. Sproull, Velasco.

" Arkansas, Wm. H. Fulton, Little Rock.

" Maine, Mrs. A. C. Hatch, Houlton.

" Connecticut, Wm. H. Kirk, West Cheshire.

" Louisiana, John Kasson, Alexandria.

" Alabama, Miss Fannie L. Norris, Shelby Springs.

" Massachusetts, E. N. Dyer, Amherst.

" West Virginia, A. Chapman, New Cumberland.

" Nebraska, W. Young, Plattsmouth.

On motion, the constitution was amended so as to strike out from the 3d article the words "Recording Secretary" so as to abolish that office.—

President Clarke on taking the chair, cordially thanked the society for the favor, and took it as an honor and an act of kindness, not only to him but to his country. Many, he said, were far better qualified than he was to discharge the duties of the office, but he yielded to none in his devotion to the cause of apiculture. If that was a qualification, he was eminently qualified. He would try to discharge the duties in a satisfactory manner, and asked the society's indulgence wherein he might come short.

W. R. King of Kentucky, suggested that it was the duty of the former treasurer to make a report. He called for it, and moved to suspend the order of business, that it may be handed in. The regular order was suspended, and after some discussion

Dr. Lucas of Illinois moved the appointment of a committee of three, to audit the accounts, settle with the treasurer and report in the morning, which being adopted, the President appointed Dr. G. Bohrer of Ia., Aaron Benedict of Ohio, and A. J. Pope of Ia., said committee.

The society adjourned to 7 o'clock.

EVENING SESSION.

The society met at 7 o'clock p. m. The President in the chair.

The special order of the evening was the discussion of the topic:

"Is bee-keeping desirable on all farms and at all suburban homes."

Dr. G. Bohrer thought that in most sections the question could be answered affirmatively, in some localities, unless honey plants were cultivated, bee-keeping would not prove remunerative. He thought, however, there were but few such places.

A. J. Pope of Ia., thought it could be overdone.

J. Z. Smith of Weston, O., thought all farmers could keep bees with profit. He kept his bees like he kept his hired men, to work all the time, and he made it a point to furnish them something to do. Alsike clover he considered of great value, the first crop can be cut at different times, so that the after growth will come in at different times in rotation, so as to furnish a long harvest for the bees. It makes hay as good or better than red clover and pays as a forage crop alone. Any farm that is rich enough to produce the ordinary crops of the farmer will produce it.

A. F. Moon said, the subject was of the great-

est importance, and if properly discussed would answer many inquiries. He was of opinion that any one living near orchards and having the ordinary varieties of vegetation around him, could keep more or less bees with profit.

Dr. Bohrer said he understood the object of the question was to ascertain whether extensive bee-keeping could be engaged in everywhere, an affirmative answer would therefore have to be conditional.

M. L. Dunlap of Ill., did not so understand the question, but as one of the committee, he understood it to be whether it could be recommended for family use, to supply every one with a desirable luxury. We have not everywhere the advantages that Mr. Hosmer enjoys, but he would venture to say that anywhere in the Northwest bee-keeping could be made a desirable pursuit. The mere production of honey, although the principal object in view, was not the only thing desirable about it. The out-door exercise that all American women so much needed was supplied. We look on this country as a stock country and no one thought of saying it was not profitable when intelligently conducted. Yet there are but few who have the patience and necessary knowledge and intelligence to make it a success. So with bee-keeping, and he advocated bee-keeping as a delightful and profitable pursuit—as a family recreation and resource—not that thousands of pounds can be raised by all, but that all can have a supply. The Southern sugar plantations were now divided up and were fast getting into a condition to furnish the necessary sweets far cheaper than the beekeeper is willing to sell his honey. The best of syrup can be had at 60 to 75 cents per gallon. The beekeeper would not like to take that for his honey. When we can teach everybody to manage bees, we add another attraction to home, something more is added to keep our boys from the cities and from the vices that abound there.

We find few farms for sale in our country now, because they are not as they have been, but rural taste has improved them, and our people are learning to appreciate the refining influences of what were once considered foolish and unprofitable investments of money and time. Our homes are made more attractive, and our children are better satisfied. Bee-keeping adds another valuable attraction, for it is an interesting pursuit, aside from its pecuniary gains. Suburban homes need these things to perfect them, and he maintained that it was possible to all to be profited by keeping bees. We have the flowers everywhere, but if they are trampled out, they must be raised, protected and made accessible to the bees, and thus it may be made a success everywhere. He had seen bees kept, and successfully, even in Chicago, in the suburbs where white clover abounds, and there is no probability that the time will ever come when it will be otherwise.

Mrs. Tupper said, she met a farmer and his wife going out of Des Moines; the farmer had received the proceeds of four loads of corn he had delivered, which was \$1¹/₂, or \$3 a load, and his wife had sold the honey from three hives of bees, for which she had received \$25. She had

a neighbor woman, who knit mittens to get the money to buy a stock of bees, and got from them the first year 100 pounds of honey.

It is often asked will the prairies always produce flowers to supply the bees with honey. She said as the prairie flowers were destroyed, and gave way, the clover and other honey flowers come in to take their places, and thought it would always be profitable to keep bees on the prairies. Men might fail, but women who knit mittens, to buy bees, get so interested that they will always make it a success. Thought it could be made a success and was desirable at all suburban homes, and in the cities, even on the housetops a few can be kept with pleasure and profit.

Mr. Hosmer was called. He said he had nothing particular to say, but that he was very much interested in hearing the subject of loss and gain discussed. Thought it as profitable as to raise butter and milk, and it would be as good an argument against stock raising, to say, it would not be profitable for everybody to keep cows, as it was against bee-keeping, to say it was not profitable for everybody to keep bees.

M. L. Dunlap. What proportion of the population of Chicago, which contains one seventh of the people of Illinois, do you suppose have a supply of honey?

Mr. Hosmer. Not one in one thousand.

Mr. Dunlap. How many see it once a year?

Mr. Hosmer. One family in a hundred.

Mr. Dunlap. All these are to be supplied.

We have been told for years, that apples would be so plenty, that there would be no sale for them, but we see them selling for \$3 per barrel to-day. Ten cents a pound used to be the price of honey, now you are insulted if you are offered less than 30 cents for it. If the beekeepers of the country can increase the business, until the masses get all they can use, there will be tons used where there are pounds now, and the common use will keep it at a remunerative price, and we can even send it out of the country, to supply our friend Clarke and his fellow-Britishers over in Canada. Plant basswood, plant orchards, sow Alsike clover and other honey producing plants, and we can make the honey, and there need be no fears, that it will not always sell at a good price.

Dr. Lucas. Speaking of promised success, it would require information and attention. Honey was not hanging on every bush, and every one's bees did not succeed, for all were not intelligently managed. To keep bees successfully, it was necessary to go at it in earnest, and keep at it until success was accomplished. Some were deterred for fear of getting stung. He advised such to protect themselves with masks and gloves. Few families in the Northwest had a supply of honey, and its use would not be general over the country, when farmers had to buy it. He did not have it, when it required an outlay of \$20 or \$30 a year to get it, but since he had got to producing it, with his own bees, it was hard to tell how much his family used. He had not the least fear that the business would ever be overdone, or that more honey could be produced than use could be found for.

Mr. Zimmerman of Ohio, thought there could be but little difference of opinion as to the desirableness of raising honey on every farm, and at all suburban homes, and that we were all interested in instructing all how to succeed—as to what plants were needed to supply the deficiency in natural resources, in addition to the plants named, he would mention catnip as yielding abundance of honey for a long time, and he would remind beekeepers that ten Italians resorted to red clover to one black bee.

A. J. Pope of Ia., moved that the discussion of this subject close, and that the question be declared answered in the affirmative, which was carried unanimously.

The unfinished topic of the morning was taken up, which was *Mr. Quinby's* first question, it was laid on the table, when the president read *Mr. Quinby's* second question as follows:

"What caused the disastrous losses of last winter, and how may the repetition of that sad experience be avoided in future?"

For sometime after the question was stated, no member offered to speak; at length

President Clarke said, it had been suggested by a lady on the left, that he had forestalled the discussion of this subject by the rendering of the verdict of the coroner's jury, "Died by the visitation of God," but he hoped no one would be deterred from an expression of opinion on that account.

Mr. Dunlap of Illinois said, he was astonished that there was not half a dozen members striving for the floor as soon as the question was called, as it was a question we know nothing about, and we are always able to discuss such questions learnedly.

A member. Was it not the long, cold winter?

Mr. Zimmerman, Ohio, said, that old bees and long, cold winters were causes of dysentery. He tried the experiment of letting some of his bees, that were affected, fly out in a room that was warmed. He saved them, while others that were not permitted to leave the hive, all died. Was again trying the experiment.

Mr. Hoogland of Pa. Could not tell the cause. He wintered his bees last winter in three ways; in a cellar, out doors and in a house. They were all about alike in mortality. He feed some syrup, and lost them, although it was said, that bees feed on syrup would not have the disease. Had on a former occasion put away a swarm without comb or honey, and fed them pure honey, and had them to increase in numbers, build comb and come out strong in the spring. Gave them no water. He stated that he lost \$1100 worth of bees last winter, but it was the only Bull Run defeat he had ever met with as a beekeeper. He could give no light on the subject as to its cause or cure.

Mr. Hosmer. Thought *Mr. Zimmerman* told the cause. He would rather undertake to winter old oxen or cows than old bees. Young bees were the best to winter well. He last winter put away 30 very small colonies with less than half a pint in each, and wintered all—he might as well say he lost no bees. He had some die, but they were queenless and he did not expect them to survive. You cannot winter bees well

in a very cold cellar. His cellar don't freeze potatoes. A neighbor, who kept his bees in a freezing cellar, lost all of them.

Mr. Southworth of Ill., asked. Did he confine his bees to the hive?

Mr. Hosmer. No, he left the top off.

Dr. Lucas. Used *Bromo chloralum* as a disinfectant, which purified the hives and removed the bad smell. One part *Bromo chloralum* to nine of water, and sprayed it on the comb with an atomizer.

Mr. Moon. Had his mind made up for several years. Every swarm that he feed with sugar syrup lived. All that were not feed, but used their own honey in wintering, died. The cause is in the honey. If they could fly out once in three weeks, they would not die. Those on their summer stands, suffered less than those in the house. Where bees get good honey, there is no danger.

J. Z. Smith. Why should one swarm die out, that sets by the side of another that survives?

Mr. Moon. Had two hives set side by side, that gathered very different honey, one was white and the other dark. Each colony was resorting to a different kind of flowers.

Dr. Hamlin, Tenn. The honey of one hive will frequently differ from the honey of others, gathered at the same time. Knew of an instance the past season, where one colony among a number gathered good molasses—hardly good molasses—while all the others gathered good honey.

Mr. Zimmerman confirmed the statements of *Mr. Moon* and *Dr. Hamlin*; had some to gather basswood while others gathered clover honey.

Mrs. Tupper had no disease among her own bees last winter, but she examined more than 500 colonies of dead bees, and in nearly every instance there was too much honey and too few bees in the hive. They were solid with honey, but no bees. Did not think the honey was to blame, as she had known the honey to be given to other bees without injury, showing that the honey was not poisonous. The brooding stopped from some cause before the honey gathering did, so that there were no young bees.

Mr. Moon. It is evident that the bees examined by *Mrs. Tupper* did not die from the disease but from a condition of things that prevented them from keeping strong.

E. S. Pope of Blue Grass, Ill. His bees died with plenty of bees as well as honey in the hive.

N. C. Mitchell, Indianapolis, Ia. Thought it a most important subject for investigation. His observations led him to the conclusion that there were two leading causes inducing the disease. The first was bad honey or honey that contained something unhealthful to the bees, which was not fatal, however, where the bees were in a condition to resist it. The second was too much ventilation which so aggravated the disease as to produce mortality. Among the numerous hives he examined he found in every instance, where there were holes in the tops of the hives for ventilation, all the bees were dead, while others in the same apiary that had no upward ventilation were safe. He advised to stop all upward ventilation and leave openings only below. When bees have their

own way, they always stop every crack or crevice through which an upward current or draft could be produced.

T. Hu'tman, Terre Haute, Ia. Pat eighty colonies in cellar. All that he saved were some he covered with paper sacks. He lost all he had in 1868, and was of opinion that it was caused by bad honey.

Aaron Benedict of Ohio. Had come to the conclusion that it was a disease in the bee, and not attributable to bad honey or improper ventilation. Had seen a hive on its summer stand that was split from bottom to top, the crack wide enough to let a rat run in, that wintered well while others that had no such ventilation died near it.

S. P. Shipley, Olena, Ohio. Wintered his bees out doors, with upward ventilation to some and downward to others, and found both to do well. Had protected some by covering with cloth and left others without protection, and had never had the disease among his bees, he was satisfied that ventilation had nothing to do with it, and agreed with *Mr. Benedict*, that it was a disease of the bee.

R. A. Southworth of Ill. Thought ventilation had nothing to do with it, as one of his neighbors had hives badly constructed, of all kinds of scraps and pieces of old lumber, that were very open, many of them leaving the bees almost unprotected, and they came out in good condition.

Mr. Kenyon, Ia. There was no doubt a cause that produced the disease, but what it is, is the question. It was not the long winters, for he lived north of this, where there is now good sleighing, and his bees were not affected. He believed it was something in the food of the bees. He obtained last spring some comb from a neighbor, who had lost his bees and used it in setting up two nuclei. The comb had no honey in it, but plenty of bee bread. The bees soon died out. He re-stocked them several times, with the same result every time. The cause was, in his opinion, in the bee bread. Ventilation had no effect. All his bees were ventilated.

N. E. Prentice, of Castalia, Ohio. Was satisfied it was not the long winters, nor ventilation. Lives on Lake Erie. Wintered out-doors last winter, some with straw over them, and others without protection. Had no disease among his bees. Thought it was disease, perhaps the epizootic.

Dr. T. B. Hamlin of Tennessee, said there was great mortality among bees in Tennessee, three years ago. Was of the opinion, that it was on account of too much honey. The cells were filled up, and in cold spells of weather, the bees had no place to cluster compactly together so as to keep up sufficient animal heat.

Seth Hoagland of Pennsylvania. May it not be that our bees are diseased like our horses, and no one can tell why?

President Clarke said this discussion had reminded him very forcibly of a story he had heard concerning a certain quack doctor, who was called on to diagnose and prescribe for a disease with which a certain old lady was af-

flicted. On examining her, he said, that it was a "Scrutunatory case," which caused the head to go "tizzerrizen." The old woman said that he described the disease exactly, and he thought it was pretty much the same with this discussion. He could throw no light on the cause of last winter's mortality among the bees, but gave his experience. Out of sixteen stocks he put fifteen in the cellar, where they had always wintered well. In the spring, five of them were dead, and the other ten were in bad condition, so that two died afterwards. The other stock he left on the summer stand, took off the honey board and substituted for it two thicknesses of old woollen carpet. He examined them and disturbed them often during the winter, and always found them in good order, and they came out in good condition in the spring.

Dr. Lucas of Illinois. Bought three dozen colonies of an old German, last spring, that were wintered out doors. When he went after them, found all that had holes in the top of the hives were alive. Those that had solid tops were all dead.

Without coming to any definite conclusion, the subject, on motion, was laid on the table.

The business committee made a report of programme for to-morrow, which was received and adopted, and the society adjourned.

THURSDAY'S PROCEEDINGS.

MORNING SESSION.

The society met, President Clarke in the chair.

Dr. Bohrer, from the committee to settle with the treasurer, made a report, showing that the treasurer's receipts at the three former meetings had been \$296, and that he had paid out \$295.27, leaving a balance of 73 cents due the society. On motion, the report was received and adopted.

Dr. Bohrer proposed to petition for some plan of registration, by which the security of queens sent by mail may be guaranteed.

Mr. King of New York, said, that the P. M. General had lately decided that bees were not mailable matter.

D. L. Adair of Hawesville, Ky., read the following paper, entitled:

What is the ultimate capacity of a colony of bees for producing honey?

Mr. Langstroth in his book "the Hive and Honey bee," says: "A good swarm ought to contain at least 20,000 workers, and in large hives, strong colonies which are not reduced by swarming, frequently number two or three times as many during the height of the breeding season." While Reaumer, Dzierzon and others, who have made careful observations, do not vary materially from this estimate, and it seems to be generally conceded, that a colony of bees as generally managed, in hives of the ordinary size of 2,000 cubic inches, which seems to be their standard, contains on an average about 20,000 workers, except for a few days at swarming time, which excess causes swarming to take place,

and the population is reduced for a time below this number, so that the effective working force is about that number.

Now it would appear self evident, that if the average population of the hive could be increased and maintained at a greater number, the production of honey would be increased in the same ratio. The question then comes up, what is the extent to which the population can be increased?

I state as admitted facts, that during the period of active honey gathering, all of the worker bees in the hive die inside of 50 days, and that the population of a colony can at no time exceed the number of eggs the queen can lay during that time.

The Baron of Berlepsch in his work on "Bees and bee-culture" gives the result of four experiments that he tried to ascertain the productiveness of the queen.

In the first, made in 1846, the queen laid 1604 eggs in 24 hours. In 1850 he counted all the brood in a large and populous hive and found 38,619. Assuming 20 days as the average time for their development, the queen had laid at the rate of 1,913 on an average daily. In 1856 he made the third examination and found 48,000 cells stored with brood, which gave an average of 2400 daily. The fourth experiment was made in the same year.

He placed an empty sheet of comb in a hive and put the queen on it. He waited until the queen commenced to lay and then closed the hive. At the end of precisely 24 hours he took the comb out and found 3,021 eggs in it. He had no means of ascertaining whether she laid in any other comb. He saw her lay six eggs in a minute, which was at the rate of 360 in an hour, or if she had continued at that rate she would have laid 8,640 eggs in 24 hours, or would have laid the 3,021 in about 8½ hours, leaving 15½ hours for rest.

Dzierzon counted the number of cells in a populous hive, that contained brood and eggs, and found 60,000, which, divided by 20, the number of days required for the bees to mature, showed that the queen had laid at the rate of 3,000 eggs per day.

Mr. Rood stated at the late meeting of the Michigan Beekeepers' Association, that *Mr. Otis* had found that a queen had laid 3,500 eggs in a single day.

During the past season, which was a poor one for honey in Kentucky, and consequently unfavorable to extreme production, I was observing the difference in the productiveness in different forms of hives, and in the best hive of the standard size of 2,000 cubic inches, I found 31,200 cells filled with brood, which required that the queen should have laid 1485 eggs on an average each day for 21 days, which I find is the average time required for the maturity of the worker bee.

In the other form of hive, in which brooding space was nominally unlimited, I found 75,163 cells filled with brood, and allowing 21 days for the queen to lay the eggs, she had laid at the rate of 3,599 eggs daily, or assuming them all to be laid in 20 days, as Berlepsch and Dzierzon did, she had laid at the rate of 3,758 each day. This last was not an extreme instance among

my hives, and although I made no careful observation of others, I am satisfied that many of them exceeded it in population and had more brood in them.

The other hive was as good as any of the ordinary size and form of hives that I had, as could be easily seen by observation, and noting the fact that the room was not to be had in them to deposit many more eggs, after deducting the space for honey that would be naturally stored by the bees, around the brood nest. Taking these experiments as a basis, we find that if a queen should continue to lay eggs, at the rate of one thousand four hundred and eighty-five daily, there would be produced in fifty days (which I assume to be the lifetime of a worker), seventy-four thousand two hundred and fifty bees, and if they could in such hive be so managed as to prevent swarming, there would be a force of bees in the hive, nearly four times as strong as Mr. Langstroth and others tell us there is in a good swarm, but as there has been no means yet devised by which swarming can be prevented in such hives, without at the same time interfering with the increase of bees, except in rare instances, and by a great deal of care, such a force seldom accumulates in one hive, or if they do, there being no room for them all to work, they are worse than idlers.

The Melipult is only a partial remedy, as it only makes room for storing honey, while it gives the wax workers no employment. Yet, with its assistance the honey yield is increased three-fold. On the other hand, in the other hive, with unlimited room for brood nest, and for the employment of the whole force of the hive at all times, the queen laying at the rate of three thousand five hundred and seventy-nine eggs daily, the force would be maintained at about one hundred and seventy-nine thousand, or nearly nine times Mr. Langstroth's estimate, and with very little attention. Let us carry our calculation a little farther, and see if we can ascertain the capacity of each of the colonies for the production of surplus honey.

With intelligent management Mr. Langstroth's swarm of twenty thousand bees, or my smaller hive of two thousand cubic inches, can be made to produce one hundred pounds of box honey, and by the use of the Melipult, if swarming is prevented, three hundred pounds might be obtained of extracted honey. Now, as the large hive will have nine times the force of a good swarm in an ordinary hive, it follows that they can produce nine hundred pounds of comb honey, or to count it exactly, eight hundred and ninety five pounds.

The question, however, arises, can the bees construct comb sufficient to hold so great a quantity of honey. When I made the statement that they could, in a pamphlet I published on "Progressive Bee-culture," the statement was ridiculed and pronounced reckless by some of our most intelligent beekeepers, but I have seen nothing to cause me to retract the statement.

An ordinary swarm of bees has been known repeatedly to build a square foot of comb in twenty-four hours. Dr. Byrd, who placed a

natural swarm in one of the large hives I have been speaking of, reports in the Western Agriculturist, that the bees built nine sheets of comb ten by thirteen inches, in a week, which was more than a foot each day.

Now fifteen square inches of comb, will, on an average, hold one pound of honey, so that each square foot of honey in the comb will weigh nearly nine pounds and two-thirds, and if they continued at that rate they would construct the comb for nine hundred pounds in about ninety-three days, or about three months.

But we must recollect that the colonies that have been reported as making a foot of comb in a day, were ordinary swarms, which Mr. Langstroth says have about twenty thousand workers, or at best, as we have shown, could only have about seventy-four thousand, while the force the large hive has to do the work with is one hundred and seventy-nine thousand, nine times the former number and two and a half times the latter, so that even compared with the seventy-four thousand, it would only require about thirty-eight days for them to construct comb enough to hold nine hundred pounds of honey.

Another and stronger proof of their capacity to supply the comb, is the fact known to all, that twenty thousand bees that constitute the working force of an ordinary swarm, *do produce* the comb in which one hundred pounds of honey is stored, and I can see no reason why nine times as many cannot build comb to hold nine times as much honey.

The next topic called, was, "what is the best method of increasing stocks?" It was laid over on account of the absence of Mr. Hosmer, the question having been put on the programme especially to draw out his method.

The next topic was, "Is the Italian bee superior to the black bee?"

Dr. Lucas of Illinois, said that it had been affirmed and re-affirmed so often, that he did not think, there was any one doubted it. He wished no better bees than the Italians.

Dr. Bohrer, had in 1871 about an equal number of hives of each, and he only got honey from the Italians. The Italians conducted themselves better in every respect. They were more prolific. Had not noticed that they worked at unusual hours, or on red clover to any extent, nor were they any more exempt from disease.

Mrs. E. S. Tupper of Des Moines, Ia., for several years had only Italian bees; during which time she had seldom seen a moth, or had a robbery. This year in addition to her Italians, had to manage 150 stocks of black bees. The blacks were troublesome in robbing, and the moth was numerous and destructive among them. The blacks would not defend themselves against the moth, when weak or queenless. The season was bad, and the moth was very destructive to the black bees, around in the country, while the Italians were nearly exempt from their ravages. In Iowa, it is conclusively proven, that in poor seasons the blacks do noth-

ing, while the Italians nearly always hold their own.

Dr. Bohrer said, the Italians had one fault. They were inclined to swarm too much, late in the season.

Seth Hoagland of Pennsylvania, said, it was not the object of the committee to hear expressions of opinion from celebrated queen breeders such as those who have spoken, but from those of the society who are in a position to give a disinterested opinion, from having practically tested them throughout the country.

Dr. Bohrer said, he was not desirous of selling any more queens, as he could make it more profitable to produce honey.

Hon. M. L. Dunlap of Illinois. Said he was not interested in the queen business, and was of opinion, that the introduction of the Italian bee was a move in the right direction. The black bees were no doubt degenerated, by long years of close in-and-in breeding, and the intermingling of new blood with them had the effect of improving them. On the other hand, the Italians had been misrepresented, and had too many good qualities attributed to them. They had been overrated in many respects. The queen raiser was to blame for this. He did not find the Italian as gentle as the black bees, the opinion of others to the contrary, notwithstanding. They were as easily destroyed by the moth. He was not a commercial bee-ist, as he only kept bees for his own use and gratification. He had none to sell. He was interested, however, in obtaining the best, and if there was such a thing, he would like to get them pure. He had tried to find pure Italians, and would have had them long ago, but had not been able to find who had them. He would like this society to decide by resolution, what were pure Italian bees, and also where they could be had.

H. A. King of New York. Said if he wished to help grind an axe, he would say that his friend Winder had pure Italians, as pure as he had seen in Italy. He (King) examined 200 colonies in the apiary of Von Hruska, and found two there which he pronounced impure. Hruska admitted that they might be impure, as he had bought them from other parties.

Dr. Bohrer discussed the question of purity, and said, the Italian bee was in the condition of recently established breeds of hogs, cattle, and other improved stock that did not become constant, until after a long series of "breeding out," or careful breeding, and concluded by saying that the type of the Italian race was not so fixed as to produce a regular, uniform insect.

Dr. Lucas said, his experience was with Italian bees from four different breeders, and that full blooded and half bred Italians yielded well, but that one-fourth and lower grades were no better than black bees. Thought the honey of the Italians heavier, more dense, and had a superior flavor. They may not have a longer proboscis, but were superior as honey-gatherers and more quiet.

M. Disher, Lewisburg, Ohio. Bought his first Italian bees of Langstroth, who told him that they would work on red clover. He made observa-

tions to find out if it was so. The first count he made, he found four black bees on the red clover to eighteen Italians. The second time he found six black bees to twenty-eight Italians. The Italians worked two hours in the morning on red clover, before the black bees commenced on white clover. When the Italians swarm naturally, he found them more cross than the black bees, but in making artificial swarms they are more easily managed. The Italians he found almost entirely free from the moth.

H. A. King. Thought that natural Italian swarms were more cross than the black bees.

Mrs. E. S. Tupper confirmed the statement, and gave as a reason, that the black bees always made preparation for swarming, by filling themselves with honey, while the Italians were not so provident, and consequently were crosser.

Mr. Southworth of Illinois. Could not see but what the Italians would rob as quick or a little quicker than the black bees. When they smell honey, they "go for it." They "go for" the moth too.

Mr. W. R. King of Kentucky. Agreed with Mr. Southworth as to the capacity of the Italians to find sweets a long way off. In transferring bees $2\frac{1}{2}$ miles from his apiary, his Italians appeared as robbers in great numbers. The Italians were more inclined to store honey in the lower chamber, and would not work in boxes as readily as the black bees.

J. S. Hall, Mount Healthy, Ohio. The moth worm will get into hives of all kinds of bees, but the Italians will cut them out and repair the holes, while the black bees let them alone, and finally succumb to them. He would on that account, prefer them, if for no other reason.

Mr. Wilkinson of Ia. Asked if there was any difference between a cross of the Italian drone and a black queen, and the cross of a black drone on an Italian queen.

Mr. Zimmerman of Ohio. Said the cross of the Italian drone and black queen was preferable to the other cross, and that the Italian was preferable in every respect to the black bee.

Dr. Bohrer. Said when an Italian swarm of bees determined to fight, they can make the black bees ashamed of themselves. In hiving them, he had got himself completely "coated" with them, so that it took him two hours to get his "coat" off.

N. C. Mitchell. Had a colony of pure peaceable Italians that swarmed, and when he attempted to hive them, became extremely belligerent. Several persons went up into the tree to get them down, but had to retreat precipitately. He went up himself, and got severely attacked.

A member. How did they compare with the Egyptians?

Mr. Mitchell. The Egyptians can shoot a dead shot at any distance, from 10 feet to a mile. The Italians cannot do that.

Mr. Pope of Illinois. Said he had opened and handled the Egyptians that whipped Mr. Mitchell so badly, and found them perfectly docile.

N. A. King suggested, that as what was being said here about the fighting qualities of the

Italians, would be published to the world, that it should also be published, that, if they were sprinkled with sweetened water, they would fill themselves and become perfectly gentle.

S. P. Shipley of Ohio. Said that the Italians increase faster, and have many qualities superior to the black bees.

Dr. Hamlin of Tennessee. Feared that his opinion would be ruled out, by what *Mr. Hoagland* had said, as he was a queen raiser, but he agreed with *Mrs. Tupper* in what she had said of the good qualities of the Italian bees. For several years he had no others in his apiary, and had almost come to the conclusion that the moth was becoming extinct, as he had seen but few of them. During the last year he had been handling black bees in other apiaries, and found it was not so.

Mr. Allen, Kansas City, Mo. Thought there was a necessity for a better stock than the black bees, and that it was found in the Italians. Did not think it possible that the black bee could be bred up to the perfection of the Italians.

Mr. Pope, of Ill., said the Italians were easy to handle, and better in every respect.

Mr. Shipley recommended chickens as a remedy for the bee-moth. Said he set his hives low down, and placed the coops of young chickens among them, and they caught many moths.

President Clarke. His experience with the Italians was entirely satisfactory, and considered that he had been well repaid for all the trouble and expense he had been at to get them. He disagreed with *Mr. Dunlap* in much he had said about them, and had thought until now, that intelligent beekeepers were unanimously agreed as to the great value of the Italian bees.

J. S. Merrill, of Ia., believed that the Italians were superior, and desired an expression of the opinion of the society to that effect. He therefore moved that the subject be referred back to the committee, with instructions to report a resolution to that effect.

Mr. Dunlap, of Illinois, moved to lay *Mr. Merrill's* motion on the table, and advocated this course on the ground that the expressions of individual opinions here were sufficient to inform the people, and they were competent to judge from what had been said whether they had merit or not, and the passage of a resolution by this society would have no force and would fail dead.

Mr. Dunlap's motion was adopted, and *Mr. Merrill's* motion was tabled.

Dr. Hamlin moved that it be decided by a rising vote whether the society considers the Italian superior to the black bee. The motion prevailed, and on a vote being taken, it was found to be unanimous in favor of the Italian bee.

Dr. Lucas, of Illinois, moved to amend the 7th article of the constitution so as to read as follows:

"No member shall be entitled to the floor more than five minutes in the discussion of any motion, resolution or petition, without consent of the society, nor a second time, unless by consent of the President or a majority of members present."

Which was adopted by the requisite constitutional vote.

The topic laid over in the morning, was called up, viz.:

"What is the best method of increasing stocks?"

The President called on *Mr. Hosmer* to open the discussion.

Mr. Hosmer said he had no objection to state his method. In the spring he gets the queen to laying as soon as possible, by feeding the bees. The bees when set out of the cellar, have given to them only as many sheets of comb as they can cover; these are placed against one side of the hive, and a sack of honey is hung on the opposite side as far from the bees as it can be got, inside the hive. The sack is made by covering a frame on each side with common "domestic." The honey is poured in from the top. The bees take the honey by sucking it through the cloth. The queen will lay very rapidly, and soon fill the frames with brood, when other frames of empty comb are introduced, which is repeated as often as necessary.

A *Member* asked if it would not be better to place the feeding sack alongside of the comb.

Mr. Hosmer said, No. Place it as far off as the size of the hive will admit, and the bees in carrying it over to the cluster will "fool" the queen. She will think the honey harvest is going on and lay accordingly. The brood comb should be kept emptied of honey. When the lower story is about filled with brood, he moves it to the upper story, a frame or two at a time, and continues to supply the queen with empty comb below.

A number of questions were at this time put to *Mr. Hosmer*, in answer to which he stated, that the quart of bees he put away in his cellar did not increase while in the cellar, and were all he had to commence with in the spring. He was asked what he considered a quart of bees, and how much comb could they cover so as to nurse and take care of the brood. *Mr. Hosmer* said, when he said a quart of bees, he meant a quart of bees, which he estimated would consist of five thousand bees. He did not mean a natural cluster as big as a quart measure, for that was not a quart. He said, "If you will take a quart measure perforated with holes and place it over a cluster of bees and sprinkle them with cold water so as to drive them into the measure, what can crowd into it will be what I consider a quart."

He gives no ventilation whatever in summer; he even contracts the entrance in the spring, in order to keep the hive as warm as possible. He continues this shifting until he has the whole hive, which contains eighteen frames, filled with brood. Thus he raises his bees.

To increase them he first sets up a nucleus by taking from a hive that contained a select queen, one sheet of brood and adhering bees, and permitted them to form and perfect queen cells. He then made as many equal colonies from the original one as there were queen cells; giving to each a cell out of which to raise a queen. This would be the management he would give one swarm. He was asked how many colonies he

could make by this management. He said he had made nineteen large swarms from one. The first division he made four new ones, and as they were strengthened up by breeding, he went through the same process with each of the new colonies. A quart was his standard for wintering, and it was enough to start with in the spring. He used common "factory," to make feeders of. The whole theory was to keep the bees feeding all the time when they can get none in the fields, regardless of the time of year. The past season he had not done as well as usual. He started in the spring with twenty-five colonies. His sales of bees from them amounted to \$528, and he had secured two thousand pounds of honey, and had now one hundred and eight colonies. Sold swarms at prices averaging \$15 each. He said he had made as high as ten colonies from one in September.

Sugar syrup was as good or better than honey for feeding, but he generally fed honey, as it was cheaper to him. He estimated that it cost him a cent a pound; he raises all his queens from one hive, and makes up the swarms from the others. As he takes out sheets of brood for queen raising, he puts in empty comb, and in that way one queen would furnish all the eggs needed.

He was asked if he had ever secured one thousand pounds of honey from one swarm. He answered that he never had said so, although it was reported over the country that he had so stated at Cleveland. He only proposed to do it if some one would buy all his bees except ten colonies. He thought he could do it; he believed that he had done it this year, but did not keep the stocks long enough to put the steel yards to them. He disliked to state what he believed he could do, as it would be said that he said he had done it. His offer made last year at Cleveland was still open. No one had yet accepted it. It had been said that he used magic; the magic of the whole thing was that he had the best honey-producing district in the world. He was a bee hunter when he went to Minnesota, but he lived there five years before he could get the bees to work on "bait;" the yield of the honey was so great and so continuous, that they had to be "lined" from the flowers; such was not the case all over his State, it was only so in certain favored localities, but he could point out a number of localities that were as good as his. The wild rice was perhaps the best of the flowers, but it was confined to certain districts. There had been no cessation of the honey flow, this year, from May to September, although it was generally pronounced a poor season. He sowed eight acres of black mustard (*sinapis nigra*, the seeds of which furnish the mustard of our tables). It furnished abundance of honey. He added that it was not uncommon for twelve natural swarms to issue from one hive in a season in Minnesota, and to be successfully wintered. The Society adjourned to 1.30 P. M.

AFTERNOON SESSION.

The society met at 1½ o'clock, the President in the chair.

The best method of increasing stocks was further discussed.

Mrs. E. S. Tupper said, as soon as she took her bees from the cellar in the spring, she aimed to increase them as fast as possible, by feeding, so as to have all her swarms made early. Early swarming is necessary in successful bee-keeping. The early swarms make all the honey. About the last of May she divided every hive, by taking out of each a strong colony. She thus doubled her stocks, and afterwards prevented farther increase. At the time of making the swarms, she had a young queen to give to each colony, which prevented after-swarming, but if allowed to raise their own queens they would swarm. This season she had made some late swarms after Hosmer's quart plan, and had twenty-two in the cellar to try.

In the spring she tried to have plenty of honey in the hive, and empty comb, to induce early brooding. As the comb was filled with eggs, she moved it apart and inserted empty comb. The queen will lay in the spring in proportion to the room she has, the supply of food, and the temperature of the hive. She closes the hive as tight as possible, as Mr. Hosmer does in the spring, and covers the top of the frames with paper, so as to retain as much heat as possible.

A. F. Moon had given his method before, but would repeat it. He had the best success in the spring by first equalizing his colonies, so as to make them all strong alike. When rapid brooding is secured, he goes among his hives and takes a frame of brood from each colony, with the adhering bees; from strong colonies he takes two frames. When enough are obtained, he fills a hive with them. He furnishes each new colony with a queen cell, which he has raised by taking queens from enough hives to raise a sufficiency of queen cells. He repeats the operation every three or four days, until he has increased to the desired number.

The next topic in order was:

"How to secure the largest amount of surplus honey?"

W. R. King, of Ky., moved to suspend the order of business for an explanation. Carried.

W. R. King said he understood from the report of the committee that settled with the treasurer, that \$158.76 had been paid for printing the transactions of the last meeting of the society. If so, did they not belong to the society, and was not each member entitled to one? He said he had applied for a copy and was told he would have to pay twenty-five cents for it.

H. A. King, of N. Y., said, that of course they belonged to the society, and they had a right to dispose of them to members gratis.

W. R. King moved that they be ordered to be brought in for distribution, which motion was adopted.

The discussion of the topic in the regular order, was resumed.

Mr. Hosmer was called for. He declined. He said he once had the misfortune to be a tax-collector, and had to collect a special tax. Every man he went to had to have the object of the tax explained, and he repeated the same tale so often that he got tired of it long before he col-

lected all the money. He was afraid he had got into the same fix here, as he thought he had fully explained all he knew about securing honey several times.

Dr. Bohrer. In order to secure the greatest amount of honey, it was necessary, 1st. To have a good locality; 2d. Good seasons; 3d. Strong colonies of bees; 4th. A good movable comb hive of some sort; 5th. An extractor. To secure the most box honey, the closer the boxes can be put to the bees the better. Bees should be stimulated early in the season so as to get them strong. He fed syrup when necessary, but queens could be induced to commence breeding, even in the cellar, by opening the hives and handling the sheets of comb; it roused up the bees and set them to work. Bees may be set out sometimes as early as February or March; seldom has any in his cellar in April. Carries them out in the day time.

Mr. Tupper thought there was less confusion among the bees when they were set out at night.

Dr. Bohrer. If the weather gets cold again after setting them out, he takes them back.

W. R. King, of Ky., said he got two hundred and eighty pounds of comb-honey from one hive of bees. They were gray bees, not Italians. The honey was in frames, not boxes. All the comb they had was nine frames full, with strips of comb on the others for guides. The hive had twenty-four frames in all, on the principle of Adair's and Gallup's "New Idea," but the model of the hive was in the patent office before they published it. The bees made all the comb for the surplus except the strips. As the combs first given were filled up, he spread them apart in the middle, and inserted between them the empty frames with comb-guides. If a top apartment was used on the hive, he preferred to have it all in one, because if divided into two or more, it required more bees to keep up the animal heat necessary to keep up the temperature in so many apartments. Bees will store more honey in a single chamber than in many, and he found that if top boxes were more than seven inches deep, the bees were slow to commence work in them, as they had to go too far from the normal cluster.

Mr. Wilkinson, Ia. Will bees construct comb from sugar syrup as well as from honey?

Dr. Bohrer. Had bees to build comb when fed on syrup in the winter?

Mr. Moon. Prepares his honey-boxes with pieces of comb in them, which induces the bees to begin work. He gets his boxes as close to the cluster of bees as possible. In answer to Mr. Wilkinson's question, he said, he once kept bees in a dark room for fourteen weeks, and had twenty boxes filled with honey; it was all deposited in comb made from sugar alone. He exhibited it at the fairs, and took premiums with it as the best honey.

Mr. Southworth, of Ill. Had a considerable quantity of comb and honey made from sugar during the past season.

Mr. Moon was at Mr. Southworth's and assisted him in feeding the sugar syrup to his bees. The honey from it was taken to the Illinois State Fair, and had the premium awarded to it as the best box honey.

Mr. Shipley made syrup of A, No. 1, coffee sugar, and fed it to his bees in troughs, after cold weather, filling the troughs with a quart of the syrup twice a day. The bees took it all, and thus he strengthened up all his weak colonies.

Mr. McFatridge, of Ia., moved his bees to the pasturage. He put on upper chambers when he moved them to a poplar grove. When the linden bloomed, he moved them to a linden wood. Sixty hives gathered a ton of poplar honey, and two thousand four hundred pounds of linden honey.

Mr. Mitchell tried two colonies of bees on Mr. Hosmer's plan, two years ago. Strengthened them by early feeding, and they stored a surplus from fruit blossoms. Threw it out with an extractor. He kept no account of the quantity, but the yield was immense.

Mr. Wheeldon, of Ia., thought there should be more caution in setting the example, or advising the making of honey from sugar. Many persons suspicioned extracted honey now, and if the idea gets out that beekeepers are making it out of sugar, it will be further injured in reputation.

Mr. Merrill. This matter of selling molasses for honey, and the statement going out that such honey has taken premiums at State fairs, will degrade bee-keeping and injure the business of honest beekeepers.

Mr. Southworth said he did not make a business of having honey made in that way, nor had he ever sold any of it. When it was exhibited at the fair, it was tasted on the ground by the awarding committee and others, and pronounced the best honey they ever tasted.

Mr. Moon. Every well informed beekeeper knows that honey cannot be profitably made from sugar at the present prices. The waste is so great, that it costs too much. If sugar could be had for three cents a pound, it might pay for the labor, but there would be no profit. He did not speak of it to recommend it to beekeepers, but to convince the gentleman who asked the question, that bees could produce wax from sugar.

Dr. Lucas said, in 1871, he took enough honey from his apiary, in two months, to pay for his bees, queens, hives and extractor. Without the extractor, he would have brought his apiary in debt. The extractor will pay. The pure extracted honey is more healthful than the comb honey. Wax is indigestible by the human stomach, and is injurious. There is no acid that will dissolve it.

Mr. Wilkinson would not advise feeding sugar to be stored as honey, but it might be profitably used early in the season to have comb constructed to hold the honey from flowers.

The business committee made an additional report, which was adopted.

The time and place for holding the next meeting of the society was referred to the business committee.

Mr. Hosmer introduced a resolution recommending to the beekeepers of America, a list of journals and publications devoted to bee-culture, which, after some discussion, was referred to the business committee.

The next topic was:

"The best method of wintering bees, and their spring management."

W. R. King said the south needed information on this subject. A great many things that were necessary for success in wintering bees north, were useless at the south, and their management differed in many respects. At the south the bees wintered themselves. Mr. Hosmer's or Mrs. Tupper's method was of little value at the south, where the winters were mild and short. He would like to have General Adair give his views of this question.

D. L. Adair said it was true that the management of bees necessarily differed with climate and locality, and there was not the same necessity for housing bees in the south as there was in the extreme north. It was better to do it in every climate where flowers did not bloom the whole year. There was no more difficulty in keeping bees in depositories in the south, than at the north, and while, perhaps, there was not the same necessity for it, it was resorted to with advantage. But few beekeepers would take the trouble to do it, as their bees wintered well out of doors. Mr. Moon had said that if bees could fly out once in three weeks, they would escape the bee disease. Now, at the south, even in Kentucky, there was seldom three weeks together that bees could not fly out, yet, in 1868, the disease was very fatal over a large part of the south. The sudden and repeated changes in the weather at the south, he considered were injurious to the bees, and could be avoided by housing.

Mr. Zimmerman visited Dr. Hamlin's in 1871. He arrived there on the 9th of March and found the bees flying out. He concluded that the bees flew out too much and too early, and that they needed housing to restrain them.

I. Z. Smith, Weston, O., said he had built a wintering house, 26x12 feet, and 10 feet high, with double walls filled in, with an 8 inch square hole, top and bottom for ventilation. Has in it fifty-two colonies.

Dr. Bohrer thought Mr. Smith's house a good one. He had lower ventilation in his own house, but had never been able to see its use, as we know that bees winter well in cellars, where there is necessarily no under ventilation. It is too much the case, that the people cannot be made to understand the advantages of housing bees in winter. Gen. Adair had said that the beekeepers of the south could not, many of them, be induced to take the trouble to put bees in houses. The same was true of the north, but its advantages were so great north and south that he urged it upon all.

The business committee reported a resolution locating the next annual meeting of the society, which after amendment, was adopted as follows:

Resolved, That when this society adjourns, it adjourn to meet at Louisville, Kentucky, on the first Wednesday in December, 1873, at 10 o'clock A. M.

The society then adjourned.

EVENING SESSION.

The society met at the usual hour, President Clarke in the chair.

The business committee, by Seth Hoagland, chairman, reported the following resolution, which was adopted.

Resolved, That the president of this society be authorized in its name and behalf, to address a circular to all the beekeepers of this continent, urging the formation of neighborhood, county, State territorial and provincial associations, auxiliary to this society.

The order for the evening was, "The Question Drawer." It consisted of a series of questions which had been handed in to the president by members, and which Mrs. Tupper was requested to answer, but which would, also, be open for general discussion.

Question 1.—The first question was: "Is the rocky mountain bee plant profitable, and how should it be cultivated?"

Mrs. Tupper said Mr. Terry had sent her seeds two years ago, which she planted early in the spring. It should be planted in the fall. She planted one-half acre. It blossomed in May, and continued till frost. It came up again the next year. She considered it a good plant for bees. Its botanical name is *Polanisia purpurea*. It is an annual, but re-seeds the ground, and once sown, comes again each year from the seed. She considered it valuable, even as an ornamental plant. She planted it in drills, and also broadcast, with equal success. She had planted borage, and could say as much in its favor as a honey plant, but it is a bad weed.

M. L. Dunlap. The plant is *Polanisia purpurea*, of the western plains. In Colorado it grows from three to four feet high. It has large seeds, and makes good chicken feed. He had sent out seeds all over the country. It blooms all summer, from the middle of May till frost. It promises to be more valuable for honey than any other plant. It is native to the dry plains, and in favorable situations, the stalk attains a diameter of one inch. It would be a bad weed if so used, but can be easily eradicated. It grows best in damp locations, and grows vigorously all along the waterways in Colorado. It is described in the botanies as only growing a foot high.

A. J. Pope has had it growing for two years. Cattle will browse on it. Is easily eradicated, and is not dangerous as a weed. It produces an abundance of seed.

Question 2.—"How far have Italian bees been known to fly in a swarm before settling?"

Mrs. Tupper had them to go eight miles from her apiary. Had heard some reported as going thirteen and fourteen miles.

D. L. Adair reported a small swarm or nucleus as being found more than fourteen miles from his apiary, when his were the only Italians near to where they settled.

N. E. Prentice knew a swarm to come from Kelley's Island to the mainland, a distance of seventeen miles.

Aaron Benedict said when he went to Kelley's Island there were no black bees on it. While

there he found a black swarm that must have come from the mainland, a distance of, at least, twelve miles.

W. R. King asked if bees on flying off did not keep in the same direction invariably.

Mrs. Tupper. They do nothing invariably.

Mr. Hawkins knew of a swarm that changed its course twenty degrees.

Mr. Southworth had a swarm that went straight about fifty rods and then turned at a right angle.

D. L. Adair followed a swarm through the woods for several hours and saw them change their course at least twenty times.

Question 3.—“Why do Italian swarms leave the parent hive without first filling themselves with honey?”

Mrs. Tupper. They did not seem to prepare for swarming in all instances as the black bees do. They often swarm before any queen cell is started, when the hive is very populous. Many times they issue without filling with honey. They seem to swarm from the impulse of the moment. The swarming fever comes on suddenly. She could give no reason for it.

Question 4.—“Management of extracted honey. Will it sour if not heated?”

Mrs. Tupper never had seen a spoonful of sour extracted honey. She takes it out when nearly ready to cap. In twenty-four hours a scum will rise, which should be taken off. It does not come again. Dealers will not buy boiled honey. Basswood honey is not as thick as most other honey. It should be left in until about to be sealed. Golden rod honey is denser.

Mr. Southworth had had enough of boiled honey. It injures it very much, and does not prevent candying.

President Clarke said that he was reported in the proceedings at Cleveland as having recommended boiling honey, whereas he only advised gradually heating it after candying, to restore it to a liquid state.

Question 5.—“Is there any means by which we can call back swarms, or settle them?”

Mrs. Tupper. The old remedies she thought of no avail, but flashing the sun on them by the reflection of a looking glass would cause them to settle. She had seen conclusive proof of its efficacy this year.

H. A. King said that to run ahead of a swarm with a pail of sand, throwing handfuls of sand among them, would confuse the bees, and cause them to settle.

W. R. King followed a valuable Italian swarm three fourths of a mile, and fought them nearly an hour with dirt, by throwing it among them, and thereby settled them. Had several times seen them brought down, when flying off, by shooting a shot gun at them.

I. W. Winder said cold water thrown among them was effectual.

Seth Hoagland had tried throwing dirt without effect, until he learned the fact that there is always a convoy of bees ahead of the main swarm. If they are confused in any way, it has the effect to settle them. He had used the Hydro-pult, also, with effect.

S. P. Shipley said he never lost a swarm of

bees by going off. When he knew of them swarming, he whistled them back. Had last season a neighbor to come in and tell him that one of his swarms was going off. He stepped out and whistled for them, and they came back and settled, although they had got some distance.

N. E. Prentiss. If you can only get ahead of the swarm and confuse the advance guard, they will settle. Rattling behind them does no good.

Dr. Lucas related an instance in which he saw a swarm in full flight, arrested by a bright flash of lightning, causing them to descend quickly.

A. F. Moon never made noises or threw dirt, but when he sees they are going away, water thrown on them will settle them.

Dr. Hamlin had tried dirt and sand and other things, and was of opinion that anything that would confuse them had a tendency to stop their flight.

A. L. Williams of Westville, Ia. Had never tried whistling them back, but had repeatedly, ever since he was a boy, stopped them by getting before them and shooting back at them.

Mr. Southworth. Hived one swarm four times, and the last time they came out they clustered on a bush and he left them there at night. During the night they disappeared.

Question 6. “Is there such a thing as honey?”

Mrs. Tupper. Honey is generally defined to be a secretion of plants, which is gathered from the flowers by the bees.

President Clarke. Some scientists think that bees make honey. That after they gather the nectar from the flowers, it undergoes a change in the honey sac, by coming in contact with formic acid; while others contend that they merely gather it, and deposit it in the comb cells without any alteration in it.

Mr. Tupper said:—A convention of German beekeepers had discussed the subject and decided that there was no chemical change in the substance, that the bees gathered from the flowers, unless the flight of the bees operated mechanically and had a kind of churning effect on it.

Dr. Borher said, some contended that formic acid, which was the poison ejected by the bee into the wound made by stinging, was mixed with it, but that could have no effect, except to change the taste. But honey undoubtedly undergoes a change after it is deposited in the hive before sealing over, by the evaporation of water, and the peculiar odor which pervades the hive.

Mrs. Tupper. In Connecticut, the honey gathered from certain plants was when first gathered unfit to eat, on account of its acrid taste; when sealed over it was clear of it.

Dr. Lucas agreed with Mr. Dunlap, that what we know least about we can talk most about. He thought that the honey sac was only a receptacle in which to carry the honey to the hive, and it had no appendages or glands that indicated that any chemical change could be produced on the honey.

President Clarke wanted to know if there was no change produced in the sweets gathered by

the bees, how it was possible for Mr. Southworth and Mr. Moon to pass their sugar honey for a good article.

Mr. Moon, said he took the premium at the great International Fair at Chicago, in 1859, on honey produced from feeding sugar syrup, and one of the awarding Committee was so pleased with the honey, that he thought he was entitled to all three of the premiums.

(Note by Reporter. It is perhaps due to Mr. Moon to state, that after the adjournment of the society, Mr. M. suggested to me that he was not explicit enough in the foregoing statement, and the facts were, that the honey was gathered when basswood was in bloom, but was not yielding much honey, and he fed them loaf sugar syrup, to assist them in filling out the boxes. He fed about 30 pounds of loaf sugar to a colony that was making the whitest honey out of 70 in his apiary, and the largest part of the honey exhibited, was sugar syrup.)

Mr. Southworth said his bees were flying out and getting some honey when he gave them the sugar, and the honey was not all made of sugar.

D. L. Adair said that there certainly was a change produced in the substance stored by the bees, as was apparent in the taste. He instanced bees storing the juice of apples and other fruits, and pure sugar syrup stored by the bees, obtained the flavor and aroma peculiar to what is known as honey. He did not think that the distinctive aroma of honey was derived from the flowers, but that the sweets absorbed the scent from the atmosphere in the hive. It was well known that many substances, such as oils and sugars, would appropriate the scents or perfumes in the surrounding air, and any one that had opened a bee hive, would know that they gave off a scent, as rats and other animals that inhabited holes and close dens. This was absorbed by the liquid sweets, and gave it its distinctive flavor. It is evident that the flowers could not do it, as the scent or perfume of flowers differed widely from that of honey and from each other.

Question 7.—“Where two swarms of bees settle together, how do you separate them?”

Mrs. Tupper. If put into a large box, where there is room to form separate clusters, they will separate themselves.

L. B. Butler of Woodbine, Iowa, said he scattered the bees along on the ground and they would soon form separate clusters around their queens.

Mr. Moon separated them by putting them in as many different hives as there were swarms, a few in front of each at a time, so that he could see that each got a queen.

Question 8.—“How do you prevent natural swarming?”

Mrs. Tupper. With black bees, if the old queen be taken out and a young queen given them just before swarming time, it will prevent swarming, but Italians have several swarming fevers during the season. Taking out a card of comb at intervals would prevent it.

Dr. Lucas said in hiving new swarms, a card of brood would not always prevent them from swarming out again, as he had a swarm to de-

sert twice under such circumstances before they became contented.

Question 9.—“Is catnip profitable for bee pasturage?”

Mrs. Tupper thought that no plant should be sown that had not more uses than for its honey.

W. R. King, of Ky. in Trimble Co., Ky., he saw honey gathered abundantly from catnip. He thought it valuable, and advised sowing it in waste places, and along the road side.

Question 10.—“Do bees make honey?”

Mrs. Tupper. That was in effect answered under question 6.

Question 11.—“How many colonies of bees did you go into winter with in 1871, and how many did you loose during the winter of 1871-72?”

Mrs. Tupper put 84 into her own cellar and wintered all of them. One proved to be queenless and one was weak. These she united with other colonies. She put 20 colonies each into two other cellars, and lost them all.

Question 12.—“As the comb cells are nearly horizontal, what prevents the honey from running out before being capped over, and can this principle be applied to domestic purposes?”

Mrs. Tupper. The cells are not exactly horizontal. The honey was held in by capillary attraction. She saw no use the principle could be applied to for domestic purposes, further than is already the case.

Question 13.—“What is honey?”

D. L. Adair said, strictly speaking, there was no distinct substance that could be called honey. The bees gather from flowers, from the different sweets know as honey dews, and from the saccharine juice of fruits and plants, substances that consist chiefly of sugar in some of its forms, mixed with other secretions and essential oils, and store it in the comb cells, and it is called honey. It necessarily varies widely, depending on the source from which it is derived. All honey is sugar containing vegetable substances in solution with it. Sugar in all three of its forms is in a general sense, the sweet principle of plants, fruits and trees.—Cane sugar, fruit sugar and what is known as grape sugar vary but slightly in their constituent elements and can be chemically converted into each other. They differ only in the proportion of hydrogen and oxygen or the elements of water. Bees will gather and store up anything that sugar in any of its forms is mixed with, so as to give a decided sweet taste, and while it may be true that in the process of gathering and transferring to the hive, no chemical change takes place, they mechanically change its taste by its absorbing the scent peculiar to the hive and often change its consistency by a process of evaporations of any excess of water.

Question 14.—“Is it advisable for beekeepers who keep bees on a small scale to have a honey extractor?”

Mrs. Tupper thought it would pay any one however few colonies he had. When bees refused to work in boxes, by taking out all the honey from below with the extractor, it would stimulate them to work in the boxes, and the extracted honey in that case was a clear gain. Uses a tent, when no honey is being gathered,

to prevent robber bees. Found the tent useful for many other purposes in the apiary.

W. R. King. Is there not danger in recommending too general a use of the extractor? In many instances harm was done by an excessive use of it.

Mrs. Tupper thought the same objection could be made to everything used about bee-keeping. Everything could be carried to extremes.

W. R. King. Thought there should be an expression of opinion from the society on the subject, as he had known great damage done by injudicious use of the extractor.

Mrs. Tupper did not think the difficulty could be remedied by any action of this society, as specific directions could not be given as to how and when to use it. Each would have to learn for himself. She said it should never be used on comb that had brood in it, in any stage, as from careful experiment she had ascertained that in every instance the brood, even after it was capped over, was destroyed.

The society then adjourned.

FRIDAY'S PROCEEDINGS.

The society met at 8 A. M., President Clarke in the chair.

The business committee reported the following resolutions, which were severally adopted:

1.—*Resolved*, That our thanks be tendered to the several railroad companies and hotelkeepers, for reduced fare and boarding.

2.—*Resolved*, That the thanks of this society be tendered to the judges of the Supreme Court of Indiana for the use of their court room.

3.—*Resolved*, That the janitor of the house be paid ten dollars for his services.

4.—*Resolved*, That D. L. Adair be paid fifty dollars for his services as reporter of this society.

5.—*Resolved*, That the thanks of this society be tendered to our worthy president, Rev. W. F. Clarke, for his able opening address, and the impartial manner in which he has presided over our deliberations.

W. R. King said he understood from the action of the society yesterday, that the printed reports of the Cleveland meeting were to be brought in and distributed to the members, but it had not been done. Why not?

H. A. King said Mr. Schofield informed him that he had only been paid for what supplied the actual members, and that the balance of them were his property, but that any of the new members could get a copy by calling on him for it.

The regular order of business was then called, which was:

"Experience in importing and rearing Italian queen bees."

Mr. Lucas, of Ill., stated that beekeepers all over the United States had been imposed upon by one, J. A. Chevalley, of Switzerland, who had advertised Italian queens in the "American Bee Journal," and many had sent him money, from which they never got any returns. He had sent him two hundred and fifty francs, in a draft on Paris, which money Chevalley received from the bank, but had failed to send him any

queens or give him any satisfaction. On inquiry in Europe, he was informed that he was entirely unreliable, and he thought the fact ought to be published by the society. He therefore offered the following resolution:

"Whereas, J. A. Chevalley, professor at the gymnasium cantonal, in Bellinzona, Canton of Tessin, Switzerland, has failed in every instance to comply with his promises made to importers of Italian bees, through the American Bee Journal, many having sent gold drafts, for which neither queens, money, nor satisfaction has been given;

"Therefore, Resolved, That the beekeepers of North America are hereby notified that we consider Prof. J. A. Chevalley unworthy of patronage as an exporter of Italian queens.

Mrs. Tupper said she had sent money to him also, and, although, she had a letter from him, acknowledging the receipt of the money, he sent her no queens.

J. W. Winder, of Cincinnati, O., sent him seventy-two dollars, for which he got nothing.

H. A. King said Mr. E. J. Peck of New Jersey, had also sent him money without getting any queens.

The resolution was adopted.

H. A. King offered the following resolution, which was adopted.

Resolved, That the thanks of this society be tendered to the Italian Bee Company, of Des Moines, Iowa, lately consisting of Mrs. E. S. Tupper and Mrs. Annie Savery, and also to Charles Dadant, of Illinois, for their efforts to make a large importation of Italian bees, which, unprofitable to them, in a pecuniary point of view, has been the means of furnishing pure stock to many parts of the country, from New Brunswick to Texas.

Dr. Hamlin, of Tenn., presented a dried specimen of *vesicaria lescurii*, a plant peculiar to the vicinity of Nashville, which he considers the best early honey plant; as it blooms in April. It comes up from the seed in the fall, blooms the next spring, and then dies. Is not troublesome as a weed.

President Clarke presented and read the following letter from Vice President W. D. Roberts, of Provo City, Utah, which was ordered to be printed with the proceedings.

VIRGINIA CITY, Nov. 4th, 1872.

To the President and Members of the North American Beekeepers Association in Convention assembled.

GENTLEMEN:—Knowing the interest you take in the advancement of bee culture, I improve the present opportunity of making a short report of my labors in that direction. During the last six years I have imported into the Territory of Utah, over six hundred colonies of bees; and against the opinion of almost all the old settlers, have made a success of the enterprise. Utah has now proven to be among the first in successful bee-culture, in proportion to the amount of bees in the Territory.

I am now in the Territory of Montana for the same purpose. Have brought, on a wagon, thirty colonies of bees, from appearances, I

will meet with less (if it is possible) encouragement here, than in Utah; but I am not discouraged, and am determined to prove to the Montanians that this is a good country for bees, and, after accomplishing the same good work in Idaho, I shall retire from the list of importers and content myself with the managing of a few colonies at my home in Utah. You will excuse me for not giving a description of the resources of this country for the honey bee. I would be glad to do so, but cannot, for the reason that it is winter here, and I have no way of knowing. I shall return in the spring and learn more of the country, and at your next annual meeting will endeavor to make a more full and complete report either in person or by letter.

Enclosed, please find one dollar, for which credit account of membership for 1873. If it is not enough I will remit the remainder immediately on ascertaining the fact. If I succeed in my enterprise, I shall next introduce the latest and best improvements in hives, honey extractors, and all other inventions calculated to assist the beginner in the management of his bees. Any person wishing to write to me, will please direct Provo City, Utah Co., U. Ter.

Wishing you a pleasant and profitable time, I subscribe myself,

Truly yours,

WM. D. ROBERTS.

President Clarke offered the following resolution, which was adopted:

Resolved, That the thanks of this society are hereby tendered to the proprietors, editors and reporters of the newspapers published in this city, for their courtesy and attention in publishing the proceedings of this body, and although in some cases, inaccuracies have crept into said reports, the nature of the subjects discussed, and the circumstances of the case, render this not surprising, and on the whole the general correctness of such reports is not materially impaired.

Resolved, That thanks are also tendered to such papers at a distance, as had the enterprise to send special, competent reporters, particularly the "Prairie Farmer," H. L. Emery, reporter; "Chicago Tribune," Miss Ella E. Dunlap, reporter; and "New York Tribune," Mrs. E. S. Tupper, reporter.

On motion, the reading of the minutes of this meeting was dispensed with, and made the first order at the next meeting.

Miscellaneous matters were then called for.

S. J. Pope said that if a queen should escape from a cage, all that was necessary to recover her was to stand still and she would return in a little while.

Dr. Lucas in examining a colony of Italian bees, found an old queen on one sheet of comb, and a young one on another, left both in the hive all night, and found both safe. Took out the old one. His experience was that a queen with clipped wings would not live more than two years.

W. R. King, in Tusculumbia, Ala., transferred forty colonies of bees. Some four weeks after in examining them he found a hive with two queens in it. They remained so four or

five days. He took the old one out, but returned her; six weeks afterwards they were both still there.

D. L. Adair said when a queen becomes unfertile from old age, the bees cease to recognize or regard her as a queen, and she is tolerated as any worker bee of the hive. Her ceasing to lay is the cause of a queen to supersede her being produced, and to all intents and purposes, there is but one queen in the hive. He had known several instances, where the old queen remained in the hive for some length of time after the young one was produced, to take her place. In one instance, the old queen was five years old and not only had her wings clipped, but she had no more wings than an ant, showing that *Dr. Lucas'* conclusion, that a clipped wing queen would not live more than two years, was an error. He had a queen that he let *Col. Shannon*, of Lewisport, Ky., have, that whenever the hive was opened would fly out as if in great terror. She would return to the hive when it was closed. She finally flew out and got drowned in a tub of water. She was a pure Italian, and her progeny were perfectly gentle.

Mr. Shipley inquired if any one present had kept bees in a house, and if so, whether there was not more than one queen?

Mr. Hamlin once kept bees in a house for several years, but the moth got in and destroyed them.

Wm. R. King said there was a number of bee-houses in Kentucky, in Hunters' Bottom. In every one of them, the bees died out in a few years. On the opposite side of the Ohio river, near Vevay, Ia., there lived a gentleman by the name of _____, who had over one hundred colonies in houses, but they were in frames. He sells more beautiful honey than any one in that part of the country. His houses have double walls and had about fifteen colonies to each house.

Mr. King described at some length the peculiar management of the houses, by which the owner claimed to prevent swarming, and to secure quantities of honey, but as there is a patent on the main features of the hive and house, it is omitted. The inventor claims that by a system of ventilators he controls the temperature in the house, so as to prevent swarming, and secure the greatest quantity of honey.

Dr. Lucas wished to say that *Mr. W. R. King* published a description of a fertilizing house, in the Bee Journals, and that he had built one, and followed all the directions in trying, to fertilize queens, but that he had signally failed in every attempt. He had, however, converted it into a rat-proof corn crib, by raising it up and putting under it posts covered with tin.

W. R. King said, we find in every undertaking, many that fail from not complying strictly with the conditions necessary to success. We know that queens are fertilized without flying, for we have numerous instances where queens, without wings, become fertile. Many fail, but that does not disprove the possibility of success. He stated in the Bee Journals that he succeeded with twenty-five queens out of twenty-seven, which was true. He explained at some length his ex-

perience in the matter, and the probable causes of failure and success.

Mr. Lucas claimed that he had complied with all the directions given by *Mr. King*.

D. L. Adair was called for, and stated that he had given at Cleveland, his experience, and had seen no cause to retract anything he said there. He had never tried the process advocated by *Mr. King*, and therefore could not give an opinion. Some queens he had no difficulty in fertilizing, while others would not submit to the restraint. For instance, such a wild queen as he had spoken of to-day, could not be controlled, but there was one advantage in his process, which was that there was no danger of losing a queen. If he failed to secure fertilization in confinement, he had them in a condition to use the Köhler or Benedict process. *Dr. Lucas'* queens may have been of a temperament that would not submit to confinement—on the whole, he would not recommend the practice, and did not attach much importance to it, as it required an amount of attention, and knowledge of necessary conditions, that but few would practice or attain, and it was possible to secure pure fertilization by other methods that would not take so much time and care.

W. R. King coincided with *Mr. Adair* in what he had said of the conditions and the general use of the process.

Mr. Wilkinson asked, Are the worker bees necessary to the life of the queen? or can a queen live without them?

Dr. Lucas. Had a queen in a cage in a hive for two months.

Mr. A. J. Pope. Had received a queen by mail, without any accompanying workers.

Dr. Hamlin. Had carried a queen on his person, for five days, in a cage.

Mr. Southworth. Had kept a queen four days without workers.

D. L. Adair said a single bee, queen or worker, could not live for any considerable time, out of a regularly organized colony. When separated from a colony, death was only a question of time. A colony was a unit, and all its members were necessary to the security of the others. Whenever a colony of bees was reduced in numbers below a working standard, they died out. That standard was enough bees to form a cluster to protect the brood nest, and to feed the young in such numbers as to produce young bees faster than the old ones die off.

Mr. Hulman. Had kept queens caged, laying on the frames, three or four weeks.

Mr. Moon. Had kept queens, a number at a time, in *Dr. Davis'* queen nursery, in a hive for three weeks.

N. C. Mitchell. The bees will feed one thousand queens in one hive, as long as they are gathering honey, but will neglect them after honey gathering ceases. Had kept twenty-five at a time, caged in one hive, on the frames above the bees.

Moses Hadley, Plainfield, Ia. Had kept a queen in a cage, by herself, for three weeks.

Mr. Winder asked, will two queens agree, if confined together?

D. L. Adair. In Italianizing, gave two black queens to his boys. The boys put them together

in a cage, to see them fight. They crawled over each other without showing any disposition to molest each other. They were kept in the cage for a day or two. The boys decided that they were not game stock.

Mr. Shipley said a good deal had been said about his whistling back decamping swarms, and he wished to explain upon what principle he based it. He noticed that the worker bees made a sound in flying that was peculiar to the workers alone. He noticed that the drones made quite a different sound, and that the queen made a whistling noise distinct from either. In whistling, he merely imitated the sound made by the queen. That was the whole secret. He instanced the fact, that if you bawl in imitation of the calf it will bring the cow to you, or imitating the cow, will call the calf. Hunters call up wild turkeys, by imitating the call of the turkey.

Dr. Lucas requested him to whistle as he did in calling a swarm, which he did, but the reporter finds it difficult to give it on paper.

President Clarke offered the following resolution, which was adopted.

Resolved, That official notices, signed by the president and secretary of this society, be inserted in the Bee Journals, and in all friendly periodicals, announcing the name, objects, admission fee of the North American Beekeepers' Society, and inviting beekeepers and others to seek membership; also, that official notices, so signed, be transmitted, in due time, to the bee and other journals, giving information of the next annual meeting, of railroad, hotel and steamboat arrangements, and urging a general attendance from all parts of the continent.

On motion of *Dr. Lucas*, *D. L. Adair*, *W. R. King*, and *Dr. T. B. Hamlin*, were appointed a committee of arrangement for the next meeting, at Louisville, with instructions to report through the papers in due time.

The society having concluded its deliberations, the president called on the Rev. H. A. King to close with prayer, with which he appropriately complied. After which, and the singing of the doxology, the president declared the North American Beekeepers' Society adjourned, to meet at the City of Louisville, Ky., on the first Wednesday, Thursday, and Friday of Dec., 1873.

VEGETABLE AND FLOWER SEEDS.—*Mr. J. J. H. Gregory*, of Marblehead, Mass, is well known as one of the few leading seed growers in this country. He was the original introducer of the Hubbard squash and many other of our new and valuable vegetables. All seeds from him are warranted fresh and reliable. His advertisements will be found in this number, and we invite attention to them. His illustrated catalogue for 1873 (now ready), will be sent free to all applicants.

There is to be an International Exhibition of the Industries of the World, this coming summer at Vienna, Austria. We trust the beekeepers of America will not neglect to do their share towards showing the world the progress made in the New World in Apiculture.

THE AMERICAN BEE JOURNAL.

Chicago, January, 1873.

To the Readers of The American Bee Journal.

My connection with the American Bee Journal ceases with the issue of the present number. While on the one hand I regret to part company with the correspondents and subscribers of the Journal, on the other hand I feel that it is best for the growing interests of apiculture in America that a person more able than I, and one who can give more time to the interest of the Journal, should assume its conduct. Such a one, I think, will be found in my successor, Rev. W. F. Clarke, of Guelph, Ontario, President of the North American Beekeepers' Society, a gentleman well known to the beekeepers of the United States as an able writer and an intelligent and honest beekeeper. I sincerely trust that the friends who have stood firmly by my father and myself during the trials through which the Journal has passed, will sustain Mr. Clarke in his new position. They will find him worthy of their confidence and support. I have turned over to him all the accounts and business matters of the Journal, and hence hereafter all business will be transacted by him. In closing, I wish especially to tender my warmest thanks to those kind friends who, during the past eleven months, stood by and supported me in the new and trying position that the sad dispensation of Providence, by which my venerated father was removed, called me to assume.

GEORGE S. WAGNER.

Salutatory.

With this number, as elsewhere announced and explained, the AMERICAN BEE JOURNAL passes into new hands. It will, however, continue the same as to character and aim that it has been from the beginning, and it will be the constant effort of the new Editor and Proprietor to catch the spirit and emulate the example of the lamented Samuel Wagner, its original founder and, until within a few months, its able and honored conductor. Our embarkation in this enterprise has been largely the result of solicitation and encouragement on the part of eminent beekeepers. Evidence of this is furnished in the requisition and extracts from letters which will be found elsewhere in the present number. That more names and letters are not given, results either from the absence of parties from the Indianapolis meeting, or from inability to communicate with them during the limited time that has elapsed since the change now

effected was first proposed. We trust none will feel slighted or overlooked, but that all will be sure that a word of cheer and a proffer of help will be welcomed from any and every quarter. We especially hope that all who have any experiences to relate, or any suggestions to offer, calculated to promote the interests of bee-keeping, will communicate freely with us. As of old, the AMERICAN BEE JOURNAL will take a straightforward, impartial course, anxious only for the general good. It has no patent interests, and no personal ends to promote. We shall conduct it on the principles embodied in our inaugural address at the Indianapolis meeting, and shall endeavor to make it helpful to the beekeeper, whether his apiary be located in the inclement North, or in the "sunny South." Complaint has been made that the bee journals have not sufficiently attended to the peculiarities and demands of Southern bee-keeping. All ground for this will, we hope, be removed in future, so far as the AMERICAN BEE JOURNAL is concerned. Gen. D. L. Adair and Mr. Will. R. King, both of Kentucky, are under special pledge to watch over the aparian interests of the South in the columns of this journal, and we expect at an early date valuable articles from them in this department of apiculture. We also invite contributions of facts, experiences, and counsels from our Southern subscribers generally. Several of the old-time correspondents of this journal are already under promise to continue their favors. Mr. George S. Wagner, we are happy to say, has engaged to furnish such translations of German articles on apiculture as may be of value to American apiarians. Aided by a host of earnest and friendly co-laborers, we shall toil hard to make the AMERICAN BEE JOURNAL all that its best friends desire it to be. We trust there will be a prompt payment of old scores and a quick renewal of subscriptions, and that each present subscriber will endeavor to get at least another. The number of unpaid subscriptions on the books demonstrates the wisdom and necessity of the *cash in-advance* plan, and in no way can we be more efficiently helped than by its early and universal adoption. We trust also that advertisers will give the JOURNAL a generous patronage. Its rates are low, too low, we fear, to pay adequately, but we are disinclined to raise them until we can consult with those best fitted to judge in regard to the matter. Though we have faith in bee-keeping as a fairly remunerative business, it is as yet comparatively in its infancy, and few, if any, have made, or are making, such fortunes out of it as to justify high charges. We prefer, if possible, that we and our patrons should prosper conjointly, and would go upon the maxim, "Live and help live," which is a higher and nobler one than "Live and let live."

W. F. CLARKE,
Editor and Proprietor of the
AMERICAN BEE JOURNAL.

[Requisition.]

To W. F. CLARKE, President of the North American Beekeepers' Society.

Having understood that there is a proposal on foot by virtue of which you are to become Editor and Proprietor of the AMERICAN BEE JOURNAL, under pledge to conduct it with an impartial regard to the interests of apiculture, and without respect of persons, the undersigned hereby express their pleasure and approval of the project, and promise to lend it their utmost support and co-operation.

D. L. ADAIR,
G. BOHRER,
WILL R. KING,
M. L. DUNLAP,
Miss ELLA E. DUNLAP,
GEO. L. LUCAS, M. D.,
SETH HOAGLAND,
T. B. HAMLIN,
P. W. McFATRIDGE,
WM. M. KING,
JACOB SARVES,
PERRY DANIEL,
J. W. WINDER,
J. Z. SMITH,
J. S. HILL,
JEWELL DAVIS,
AARON BENEDICT,
G. W. ZIMMERMAN.

Indianapolis, Dec. 5, 1872.

Extracts from Letters Respecting the Contemplated Transfer of the "American Bee Journal."

FROM REV. L. L. LANGSTROTH, OXFORD, OHIO.

"Mr. Langstroth requests me to write you and say he is very glad you are about to be interested in the AMERICAN BEE JOURNAL. It will give him great pleasure to aid you in any way within his power when his health will permit. Mr. L. would have written, but was taken with his 'trouble,' and it became impossible. "H. C. COWAN, for L. L. Langstroth."

FROM M. QUINBY, ST. JOHNSVILLE, N. Y.

"In regard to the scheme mentioned, my advice would be worth but little, as I have no experience. To express my feelings in relation to it, I would say I could not be better pleased than to see a paper devoted to the interest of the apiarian, instead of the patent vendor. You can count on my co-operation as far as in my power."

FROM A. J. ROOT (NOVICE), MEDINA, OHIO.

"Right glad are we to hear that there is a probability of your taking the "AMERICAN BEE JOURNAL, and most willingly will we assist in maintaining it up to its former standard, if our efforts are such as you approve of."

FROM CAPT. J. E. HETHERINGTON, CHERRY VALLEY, N. Y.

"You can hardly appreciate the satisfaction afforded by your communication of the 9th inst. I also know many others similarly affected. Mr. Quinby is delighted. I think, in fact I know, he will be with you in this good work, and be one of your most valuable contributors. I extend to you my best good will, and will help what I am able in my weak way. C. C. Van Dusen, Vice President of our North Eastern B. K. Association, were he here, would join with me in the above expression."

FROM E. GALLUP, ORCHARD, IOWA.

"You have full authority to affix my name to the project. If Mr. Geo. S. Wagner has to give it up, I do not know of a better man to conduct the JOURNAL than W. F. Clarke. Now, I do not say this in a spirit of flattery, but I say it because I mean it. I was fearful that the AMERICAN BEE JOURNAL would fall into designing and selfish parties' hands, as Mr. Wagner informed me he could not possibly attend to it much longer. The AMERICAN BEE JOURNAL *must be supported*, and you can count on Gallup for all the assistance in his power, and Chicago will be the place to publish it."

FROM PROF. A. J. COOK, STATE AG. COLLEGE, LANSING, MICH.

"I am a staunch friend of the AMERICAN BEE JOURNAL, having always recommended it to my pupils and friends as THE Bee Journal; and always knowing the high tone, scientific character, and general excellence, the same which have given it its high and solid position, I shall always be its friend, giving it my best support and hearty co-operation, so long as it continues so far ahead, in my estimation, of all other American journals devoted to apiarian interests. And, sir, I know no project so certain to insure this result, as for its editorial management to fall into your hands."

FROM L. C. WAITE, ST. LOUIS, MO.

"If I can be of any service to the old JOURNAL, please command me. That is, recollect, if the JOURNAL is to be run without respect of persons, and for the interests of apiculture. The first year I began bee-keeping, I knew a great deal more about it than I do now, which, by the way, is very little. This, I mention, that you may know what to expect from a *greenhorn*, who has kept bees only a dozen years. Am sorry that I could not attend the last convention; but as it could not be helped, there is no use in grumbling about it now."

FROM MRS. ANNIE SAVERY, DES MOINES, IOWA.

"You have full liberty to append my name to the document, a copy of which you send me. I do hope you will purchase the AMERICAN BEE JOURNAL, and if an occasional article from my pen can help any, you shall have it."

FROM M. M. BALDRIDGE, ST. CHARLES, ILL.

"I am pleased to learn that you are negotiating for the purchase of the AMERICAN BEE JOURNAL, and that in the event of its purchase, you contemplate removing it to Chicago, or to some other point more central than Washington. It seems to me that you have the requisite qualifications for conducting an impartial bee journal; one also that will be free from *axe-grinding* and *personalities*, and for maintaining its character as the standard periodical of its kind in America. With this view of the case, you may rest assured that I shall labor to the extent of my ability to increase its circulation and usefulness."

FROM J. H. THOMAS, BROOKLYN, ONTARIO.

"I am much pleased to learn that you are likely to become editor and proprietor of the AMERICAN BEE JOURNAL. It could hardly have fallen into more clever hands. It being the only bee journal on the continent of any merit, it deserves to be managed with ability and scholarship, that it may hold its own as a first-class journal, and with no desire to praise, I may say, '*thou art the man*.' You may require to exercise a little caution in the use of your 'pruning-knife,' when lopping off 'harsh epithets' and 'pruning into shape' ungrammatical communications, that you cut not off the spice and humor peculiar to the American people. You may rest assured that I am highly pleased, and that you will have my influence, and my name is at your disposal. In any way that I can be of service to you, command me."

To the Beekeepers of North America.

At the annual meeting of the North American Beekeepers Society, held in Indianapolis, Dec. 4-6, 1872, the following resolution was unanimously adopted:—

"*Resolved*, That the president of this society be authorized, in its name and behalf, to address a circular to all the beekeepers of North America, urging the formation of neighborhood, county, State, territorial and provincial associations, auxiliary to this society."

In accordance with the foregoing resolution, it becomes my duty and pleasure to invite the co-operation of every North American beekeeper with our society, the one object of which is to promote the interests of apiculture in all parts of the land. The most effectual way of co-operation, will be for beekeepers everywhere to associate and organize. If there are but half a dozen, or ten beekeepers in a neighborhood, they will do well to form a club, and hold regular meetings, at which they can relate apian experiences, discuss the contents of bee journals, and quicken each other's interest in apiculture. These neighborhood clubs should send representatives to county associations; and these, in their turn, appoint delegations to State and other organizations.

Bee-keeping has joined the onward march, which every thing of any value is making in this age. The movable frame hive, the Italian bee, the honey-extractor, journals of apiculture, and beekeepers' societies, mark an epoch of progress from which there is destined to be yet greater advance. But there still remains too many vestiges of old-time bee-keeping. Gum and box hives, with the ignorance and superstition that hover about them, are still in vogue in many apiaries. To supersede these with the movable frame hive, and with correct views of the habits and instincts of the honey-bee, so as to make bee-keeping a matter of greater intelligence, interest and profit, should be the object of every enlightened apiarian; and to accomplish this, the watchword, everywhere, must be, "*associate, ASSOCIATE!*"

The North American Beekeepers' Society is, as its name denotes, a society for the entire land—east, west, north and south. Membership in it is, however, individual, one dollar a year to gentlemen; ladies free. Its recent meeting, at Indianapolis, was well attended, and the proceedings were of great interest. The hope is cherished that a large addition will be made to its membership during the coming year; and that the next annual meeting, to be held in Louisville, Ky., the first Wednesday in December, 1873, will be a still greater success than any of its predecessors. This it cannot fail to be, if beekeepers generally act on the suggestions of this circular, which is issued, thus promptly after the Indianapolis meeting, because this is the favorable season for organizing associations, and it is desirable that no time be lost.

All existing organizations of beekeepers, and any that may be formed in response to this circular, are earnestly requested to put themselves in communication with this society.

WM. F. CLARKE,

President North American Beekeepers' Society.

OFFICE OF THE AMERICAN BEE JOURNAL,
CHICAGO, ILL., Dec. 19, 1872.

Some of our readers may bear in mind, that it was announced in the Journal some months ago, that Mr. Lamprecht, of Prussia, had discovered a method by which foul brood could be cured and rendered non-contagious. He offered to apply his remedy to any hive afflicted with this disease, which a committee appointed by the German Beekeepers' Association, might select. This committee, of which Pastor Kleine was the head, procured a stock of bees suffering from foul brood, and under their inspections, Mr. Lamprecht applied his discovery with the greatest success. He thoroughly cured the swarm, and destroyed all contagious qualities of the disease.

We trust we will soon be able to furnish the full report of the committee, which we learn will be printed in the German Bee Journal. The importance of the discovery cannot be undervalued.